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A SYSTEM OF HARMONY FOR TEACHER AND PUPIL

WITH COPIOUS EXAMPLES, PRACTICAL EXERCISES, QUESTIONS AND INDEX.

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PREFACE.

EVERY educated musician, who has any experience in teaching, has had opportunity to observe the practical value of the study of Harmony to vocal and instrumental pupils. That there are a great many persons who teach vocal and instrumental music, who are not aware of this advantage, is due to their own deficiency in the knowledge of Harmony. The study of Harmony has been much impeded by this lack of knowledge on the one side, and by a want of comprehensible text-books on the other.

The books upon this subject extant are either too scientific, or are translated abridgments of voluminous works, and are, consequently, not of sufficient practical value to the student.

In preparing this work the author has had in view principally a convenient text-book—concise, clear, well arranged, and complete; a book which would be an assistance to the teacher and the pupil—a guide to the former, and a book of reference to the latter.

The arrangement of subjects is in conformity with Richter's Manual of Harmony. For the purpose of clearness the chapters are divided into numbered sections, and these again subdivided into specially indicated paragraphs, for easy reference. The exercises are given in the sections wherever they were thought necessary. The questions are placed at the end of each chapter, and are numbered, each question likewise referring to the number of the section in which the subject is treated.

The author has seen fit to adopt a few terms which appear for the first time in this work. His object was to avoid confusion of terms, and aid the understanding in the treatment of the subject in question (see Sections 92, 161, 162, 163, 177, 178, 179, 180).

In the study of Harmony the pupil should aim to comprehend the logical necessity for the treatment of the subject under consideration. Set rules are therefore as much as possible avoided, lest they be applied mechanically. The knowledge of intervals is of the greatest importance to the students of Harmony, and particularly to the vocal pupils; the INTRODUCTION has therefore been given considerable space; likewise the chapter on MODULATION (XIV). It is, however, left to the judgment of the teacher whether all the exercises in Modulation shall be worked out or not.

This book treats of Harmony only, and leads the pupil to the harmonization of a simple melody in Chapter XV. The exercises in the last chapter are intended to give the student a facility in four-, three- and two-part writing, and serve as preparatory exercises to the study of Counterpoint.

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INTRODUCTION.

INTERVALS.

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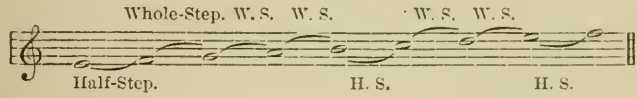
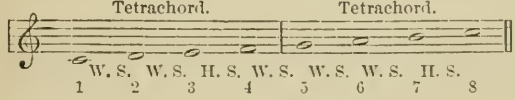
2. Staff-Degrees.—The lines and spaces of the staff are called *degrees*, STAFF-DEGREES (or steps). By placing a note upon any of these staff-degrees the pitch of the tone represented becomes fixed.

3. Whole-Steps, Half-Steps.—The *nine* degrees of the staff are not arranged so that if tones were represented upon them there would be an equal distance from any one to the adjoining one; for example:



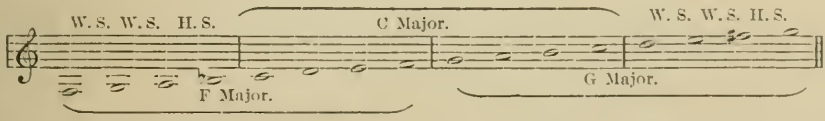
The tones represented on the first line and first space (*E*, *F*,); third line and third space (*B*, *C*,); and fourth space and fifth line (*E*, *F*,), are but a half-step apart, while the tones upon the other degrees are a whole-step apart.

4. Diatonic Major Scale — Diatonic Degrees. — A succession of eight different tones upon eight consecutive staff-degrees—with the whole-steps between the first and second, second and third, fourth and fifth, fifth and sixth, sixth and seventh degree; and the half-steps between the *third* and *fourth*, and *seventh* and *eighth* degree — is called a DIATONIC MAJOR SCALE (from *dia*—through, and *tonic*—keynote, or generating tone).



N. B.—The *eight* degrees of a scale, upon which the tones of a diatonic scale are represented, are called DIATONIC DEGREES.

REMARK.—The major scale is the most regularly arranged group of tones contained in the science of music. It consists of two halves, of equal proportion, called *tetrachords* from *tetra*—four, and *chord*—string. A similar tetrachord added to either of the two tetrachords of a major scale would form other major scales, as follows:



It will be seen that the distance from the last tone of a tetrachord to the first tone of the following tetrachord is always a *whole-step*.

5. Special Term for each Tone of the Scale.—Each tone of the scale receives a special name, viz.:

A. The first tone of the scale, the tone upon which the scale is based, and from which it receives its name, is called TONIC or KEYNOTE (see 4).

B.—The fifth tone of the scale (the fifth above the tonic), the next important tone, is called DOMINANT (the tone which governs or *dominates*).

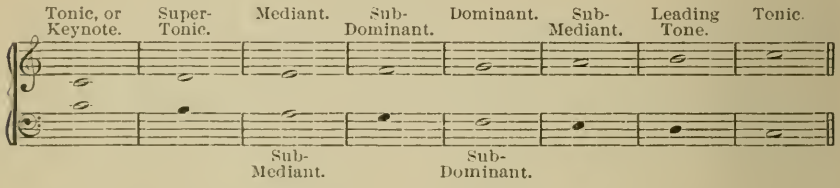
C.—The fifth tone of the scale descending (the fifth below the tonic) is the next in order of importance; this is termed SUB-DOMINANT (*sub* meaning below).

D.—The middle tone between the tonic and dominant (third tone of the scale) is called MEDIANT (middle).

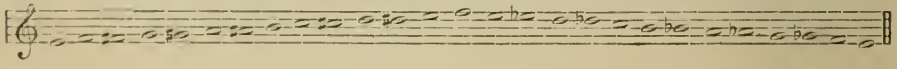
E.—The middle tone between the tonic and sub-dominant is the SUB-MEDIANT.

F.—The tone above the tonic (second tone of the scale) is the SUPER-TONIC (*super* —above).

G.—The seventh tone of the scale (the tone below the tonic) is the SUB-TONIC or LEADING-TONE, so termed on account of its natural inclination for progression upwards a half-step, to the *tonic* or *keynote*.

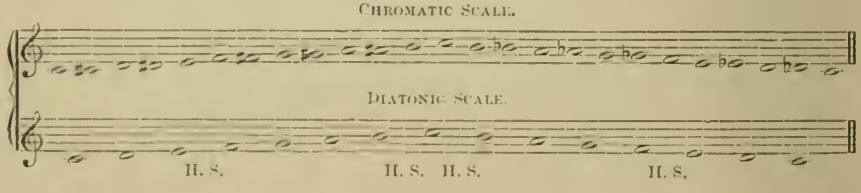


6. Chromatic Alteration—Chromatic Scale.—If all the tones lying between the whole-steps (3) were to be indicated upon the staff, some tones, in ascending, would receive a sharp, and, in descending, some would receive a flat; e. g.:



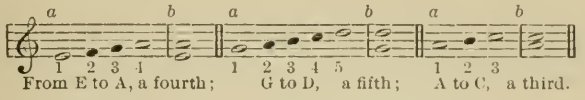
The sharp (♯), double sharp (𝄪), the flat (♭), the double flat (𝄫), and the natural or cancel (♮) are called collectively CHROMATIC SIGNS. The tones altered by these signs are not changed in their position upon the staff-degrees (2), but are thereby changed in pitch, which change is termed a CHROMATIC ALTERATION.

N. B.—A succession of twelve half-steps, ascending or descending, is called a CHROMATIC SCALE, in opposition to the *diatonic* scale (4).



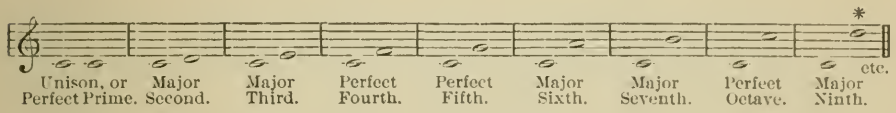
7. Interval.—The term interval (from *inter*—between, and *vallum*—fixed object,) is applied to the space between two tones as indicated upon the staff, or to the relation of two tones of *different pitch.*

N. B.—The lowest in pitch of two tones is always considered as first tone; from this tone the lines and spaces (*staff-degrees*—2) are counted UPWARDS to the upper tone, thus determining the distance of the two tones (interval) by the number of staff-degrees, thus:



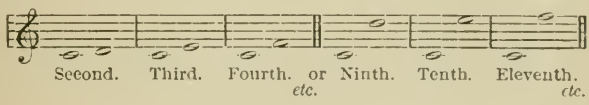
From E to A, a fourth; G to D, a fifth; A to C, a third.

REMARK.—The intervals at *a* are sounded in succession, which gives them a *melodic* character; at *b* they are sounded simultaneously, hence they receive *harmonic* significance.

8. Intervals of the Major Scale.—By counting from the tonic or keynote (5—A) *upwards* to the other tones of the scale, we form the following intervals:

Unison, or Perfect Prime. | Major Second. | Major Third. | Perfect Fourth. | Perfect Fifth. | Major Sixth. | Major Seventh. | Perfect Octave. | Major Ninth.

N. B.—The *prime*, *fourth*, *fifth*, and *octave*, are called PERFECT INTERVALS; the *second*, *third*, *sixth*, *seventh*, and *ninth* are called MAJOR INTERVALS.

REMARK.—The intervals above the octave receive a two-fold consideration; they are either counted according to their real distance as *ninth*, *tenth*, *eleventh*, etc., as at *, or as a repetition of the first series, as *second*, *third*, *fourth*, etc., placed an octave higher, thus:



Second. | Third. | Fourth. *etc.* | or Ninth. | Tenth. | Eleventh. *etc.*

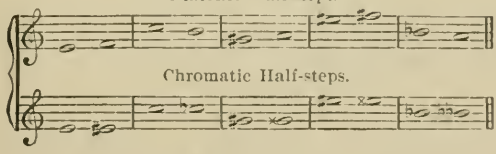
EXERCISE 1.—The intervals of the scale should be written out in all the major scales.

9. Diatonic and Chromatic Half-Step. — *The* HALF-STEP *is the smallest interval.* In the system of intervals we distinguish two kinds of half-steps.

A.—Two tones, constituting a half-step, if found upon two different staff-degrees, are called a DIATONIC HALF-STEP.

B.—Two tones, constituting a half-step, if found upon the same degree, are called a CHROMATIC HALF-STEP.

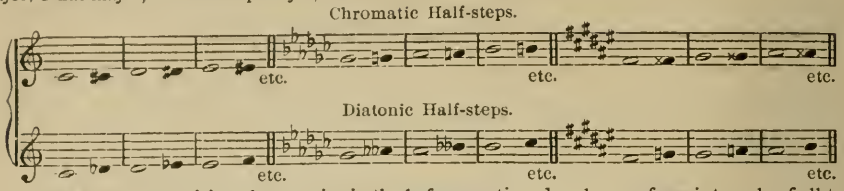
Diatonic Half-steps.



Chromatic Half-steps.

N. B.—It will be seen that the two kinds of half-steps differ in notation, but not in sound.

EXERCISE II.—Write the diatonic and chromatic half-steps of every tone of the scale of C major, G-flat major, and F-sharp major, thus:

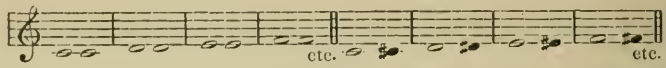


REMARK.—By writing the exercise in the beforementioned scales, we form intervals of all tones contained in the chromatic scale (6):

10. Primes—Unisons.—Two tones of equal pitch are called a UNISON (from *unis*—one, and *sonus*—sound). In the intervals of the major scale (8) the unison is also called PERFECT PRIME (from *primus*—first) on account of both tones being placed upon the same degree, both being first tone. There are two kinds of primes, namely:

A.—The PERFECT PRIME or UNISON (*a*);

B.—The AUGMENTED PRIME (*b*)—being a chromatic half-step (9—B) larger than the perfect prime.



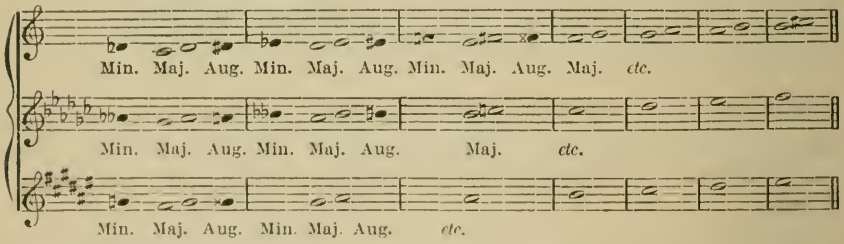
N. B.—Perfect primes can be formed of any tone, as at *a*. The augmented primes and the chromatic half-steps are identical (Ex. II.).

11. Seconds.—Of seconds we employ three kinds, viz.:

A.—The MAJOR SECOND—embracing two half-steps: *one* diatonic and *one* chromatic;

B.—The MINOR SECOND—which is identical with the diatonic half-step (Ex. II.);

C.—The AUGMENTED SECOND—a chromatic half-step larger than the major second, and embracing *three half-steps*.



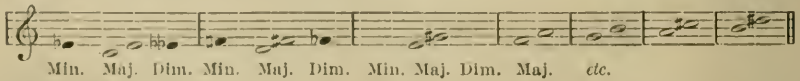
EXERCISE III.—Write the seconds of each tone of the scale of C, G-flat, and F-sharp major, as begun in the foregoing example.

12. Thirds.—Of thirds we have three kinds:

A.—The MAJOR THIRD—embracing two major seconds;

B.—The MINOR THIRD—one chromatic half-step less than the major third, and embracing three half-steps (See 11—C.).

C.—The DIMINISHED THIRD—one chromatic half-step less than the minor third, and embracing two diatonic half-steps.



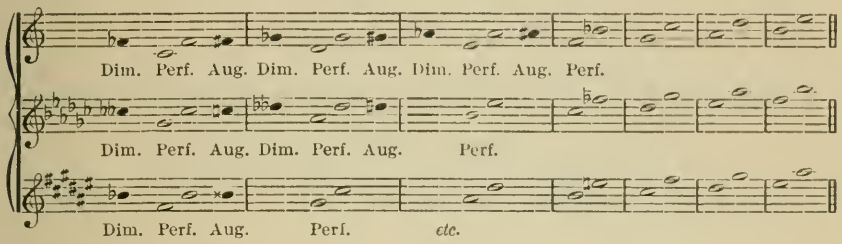
EXERCISE IV.—Write the thirds of each tone of the scale of C, G-flat, and F-sharp major, as in Ex. III.

13. **Fourths.**—Among the intervals of the major scale (8) we find the fourth (like the prime) to be a perfect interval. Three kinds of fourths are in use, viz.:

A.—The PERFECT FOURTH—embracing a major third and a diatonic half-step;

B.—The DIMINISHED FOURTH—a chromatic half-step less than the perfect fourth;

C.—The AUGMENTED FOURTH—a chromatic half-step larger than the perfect fourth, and embracing three major seconds, which is called a TRITONUS (*tri*—three, and *tonus*—tone).



N. B.—The fourths formed from the diatonic tones of the scale (4) are all perfect fourths (*indicated by whole notes*) with the exception of the one from the fourth to the seventh tone of the scale (in C: F to B; in G♭: C♭ to F; in F♯: B to E♯) which forms originally an *augmented fourth*—a TRITONE.

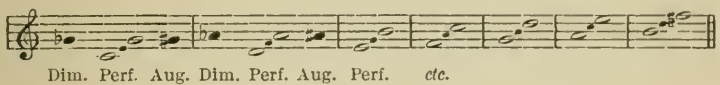
EXERCISE V.—Write the fourths in the beforementioned scales.

14. **Fifths.**—The three kinds of fifths (like the fourths) are:

A.—The PERFECT FIFTH—embracing a major and a minor third (the thirds are indicated in the example by small notes);

B.—The DIMINISHED FIFTH—a chromatic half-step less than the perfect fifth;

C.—The AUGMENTED FIFTH—a chromatic half-step larger than the perfect fifth.



N. B.—It will be observed in the foregoing example that the fifths formed from the seven tones of the scale are all *perfect*, with the exception of the one formed from the leading-tone (5—G) which is originally a diminished fifth.

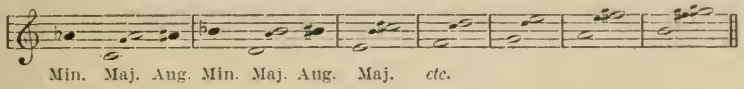
EXERCISE VI.—Write the fifths of all tones of the scales mentioned above.

15. **Sixths.**—The three sixths in use are:

A.—The MAJOR SIXTH—being a major second larger than a perfect fifth (the perfect fifths are indicated in the example below by small notes);

B.—The MINOR SIXTH—a chromatic half-step less than the major sixth;

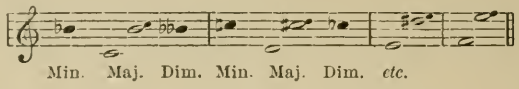
C.—The AUGMENTED SIXTH—a chromatic half-step larger than the major sixth.



EXERCISE VII.—Write the sixths in the three scales.

16. Sevenths.—The three sevenths are:

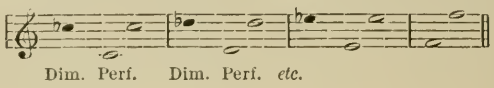
A.—The MAJOR SEVENTH—being a diatonic half-step less than a perfect octave;
B.—The MINOR SEVENTH—a chromatic half-step less than a major seventh;
C.—The DIMINISHED SEVENTH—a chromatic half-step less than a minor seventh.



EXERCISE VIII.—Write out the sevenths in the above three keys.

17. Octaves.—The two octaves employed are:

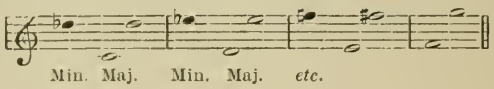
A.—The PERFECT OCTAVE;
B.—The DIMINISHED OCTAVE—a chromatic half-step less than the perfect octave.



EXERCISE IX.—As above.

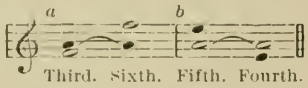
18. Ninths.—The two ninths are:

A.—The MAJOR NINTH—being a major second larger than a perfect octave;
B.—The MINOR NINTH—a minor second larger than a perfect octave.



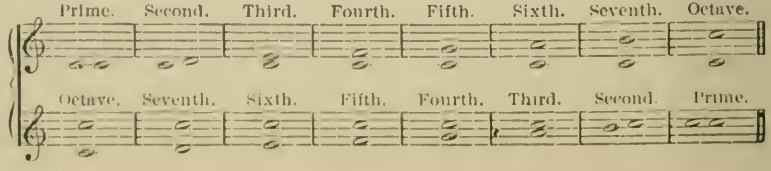
EXERCISE X.—As above.

19. Inversion of Intervals.—An interval is inverted if the lower of the two tones constituting it be transposed an *octave higher*, so that it becomes upper tone (*a*), or if the upper tone is transposed an octave lower, so that it becomes lower tone (*b*). By this transposition of a tone of an interval the original interval is overturned, thus bringing the same two tones in different relation to each other. This is called the INVERSION OF AN INTERVAL.



N. B.—By inverting the diatonic intervals of the major scale (8), we receive the following plan of figures:

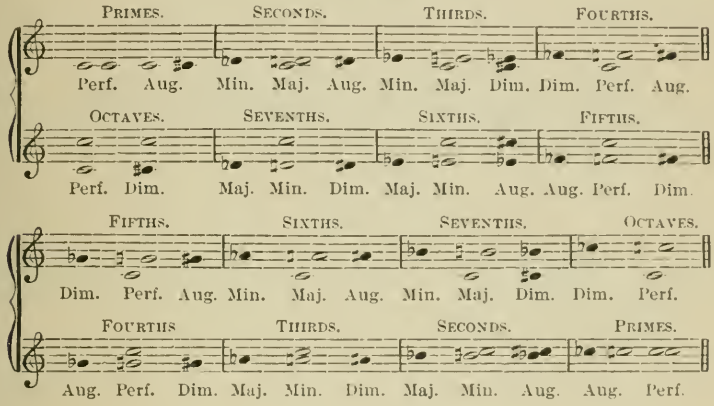
A *prime*	1	a 2d.	a 3d.	a 4th.	a 5th.	a 6th.	a 7th.	an 8va.
becomes an *octave*,	8va.	a 7th.	a 6th.	a 5th.	a 4th.	a 3d.	a 2d.	a 1 (prime).



20. **Change of Intervals through Inversion.**—The inversion of an interval not only changes the relation of the tones to each other, but also reverses the term by which the interval was originally distinguished.

The change of terms of intervals resulting through inversion are as follows:

A.—The *perfect* intervals again become *perfect* intervals (see **Remark**);
B.—The *major* intervals become *minor* intervals;
C.—The *minor* intervals become *major* intervals;
D.—The *diminished* intervals become *augmented* intervals;
E.—The *augmented* intervals become *diminished* intervals.


PRIMES. SECONDS. THIRDS. FOURTHS.
Perf. Aug. Min. Maj. Aug. Min. Maj. Dim. Dim. Perf. Aug.
OCTAVES. SEVENTHS. SIXTHS. FIFTHS.
Perf. Dim. Maj. Min. Dim. Maj. Min. Aug. Aug. Perf. Dim.
FIFTHS. SIXTHS. SEVENTHS. OCTAVES.
Dim. Perf. Aug. Min. Maj. Aug. Min. Maj. Dim. Dim. Perf.
FOURTHS THIRDS. SECONDS. PRIMES.
Aug. Perf. Dim. Maj. Min. Dim. Maj. Min. Aug. Aug. Perf.

REMARK.—It will be seen in the above examples that the perfect intervals are the only intervals which do not change their *perfect relation* to each other when inverted. This is one of the reasons why these intervals are called perfect.

EXERCISE XI.—Write out the inversions of the intervals of the scale of G♭ and F♯ major.

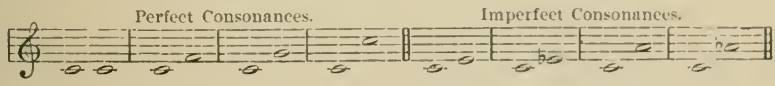
21. **Classification of Intervals.**—In the study of harmony the intervals receive a two-fold consideration: namely, a MELODIC (sounded in succession), and an HARMONIC consideration (sounded simultaneously, **7**—**Remark**). In their harmonic relations the intervals are arranged into two classes: Consonances (**22**) and Dissonances (**23**).

22. **Consonances.**—Consonances (from *con*—with, and *sonance*—sound) are intervals which (if sounded simultaneously) do not incline toward a connection with other intervals, but whose harmonic relation is satisfactory and independent (see **23**).

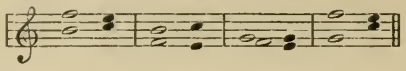
The consonances are divided into:

A.—PERFECT CONSONANCES, which are: the *perfect primes* (**10**); *perfect fourths* (**13**); *perfect fifths* (**14**); and *perfect octaves* (**17**); see **20**—**Remark.**

B.—IMPERFECT CONSONANCES, viz.: the *major* and *minor thirds* (**12**) and the *major* and *minor sixths* (**15**).

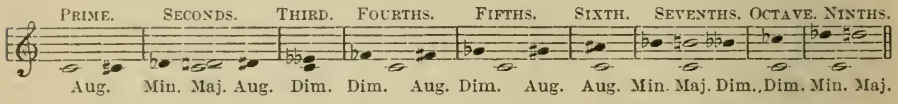


23. Dissonances. — Dissonances (from *dis*— apart, and *sonance*— sound) are intervals whose relation (harmonically) is of an unsatisfactory nature, which makes a connection with other intervals (consonances) necessary, in order to satisfy the natural tendency of progression which their harmonic relation suggests, e. g.:



N. B.—All *dissonances* have a tendency of progression, the *consonances* have not.

The DISSONANCES are: the *augmented prime;* all *the seconds;* the *diminished third;* the *diminished* and *augmented fourth;* the *diminished* and *augmented fifth;* the *augmented sixth;* all the *sevenths;* the *diminished octave;* and the *minor* and *major ninths.*


PRIME. SECONDS. THIRD. FOURTHS. FIFTHS. SIXTH. SEVENTHS. OCTAVE. NINTHS.
Aug. Min. Maj. Aug. Dim. Dim. Aug. Dim. Aug. Aug. Min. Maj. Dim. Dim. Min. Maj.

REMARK.

It is absolutely necessary that the student have a thorough knowledge of all the intervals before taking up the study of harmony, as without it he will not be able to clearly comprehend the relation of intervals and their harmonic treatment.

QUESTIONS TO INTRODUCTION.

Question 1—Section 1. What is the staff? 2—2. What are staff-degrees? 3—4. What is a diatonic major scale? 4—4. What are diatonic degrees? 5—5. What name is given to the seven individual tones of a scale? 6—5. Why is the seventh tone of the scale called leading-tone? 7—6. What is a chromatic scale? 8—7. What is meant by the term "interval"? 9—7. How are the intervals counted? 10—8. What intervals are formed by counting upwards from the keynote to the other tones of the diatonic major scale? 11—8. Which intervals are perfect? 12—9. What is a diatonic half-step? 13—9. What is a chromatic half-step? 14—10. What is a unison or prime? 15—11. How many seconds have we, and how are they termed? 16—12. How many thirds, and how are they termed? 17—13-18. How many fourths, fifths, sixths, sevenths, octaves, and ninths have we, and how called? 18—19. What does the term "inversion" signify? 19—19. What does the prime, second, third, etc., become by inversion? 20—20. What changes of terms take place by inversion? 21—20. Which intervals retain their original relation when inverted? 22—21. How are the intervals classed in their harmonic relation? 23—22. What is a consonance? 24—22. How are consonances divided? 25—22. Which intervals are perfect consonances? Which are imperfect? 26—23. What is a dissonance? 27—23. Which intervals are dissonances?

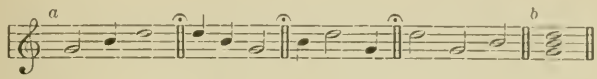
HARMONY.

Part I.—Fundamental Chords and Derived Chords.

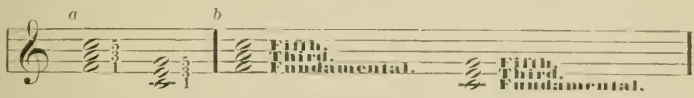
Chapter I.

THE TRIADS OF THE MAJOR SCALE.

24. **Rhythm, Melody, and Harmony** constitute the chief elements in music. The THEORY OF HARMONY systematizes the different kinds of harmonies, points out their relation, and gives rules regarding their natural connection and application. This can, however, be clearly demonstrated only in conjunction with MELODY and RHYTHM.

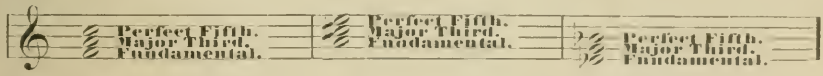
The tones constituting intervals may be sounded in succession or simultaneously (see 7), e. g.:

N. B.—At *a* the tones follow each other in different rhythmic and melodic groups, thus forming a short *melody* or MELODIC PHRASE; at *b* the tones are sounded simultaneously, thus forming an harmonious unit: HARMONY or CHORD.

25. **Triad.**—A combination of three tones consisting of the intervals $\frac{5}{3}_{1}$ (counted upwards) form a chord called a triad (from *trias*—three) at *a*:

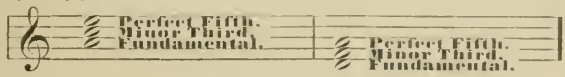


N. B.—The tone upon which a triad is based is called the FUNDAMENTAL or ROOT of a chord. This (the root) is always taken as first tone, from which we count the other tones (3d and 5th) of the triad *upwards* (7—N. B.); so that a triad consists of a FUNDAMENTAL, a THIRD, and a FIFTH, at *b*.

26. **Major Triad.**—A triad consisting of a *fundamental*, a *major third*, and a *perfect fifth*, is called a MAJOR TRIAD; being so called on account of the *major third*.



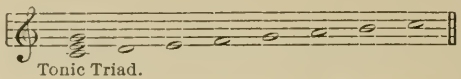
27. **Minor Triad.**—A triad consisting of a *fundamental*, a *minor third*, and a *perfect fifth*, is called a MINOR TRIAD, on account of the *minor third*.



EXERCISE XII.—Form *major* and *minor* triads upon the following tones: G, D, A, E, C, F, B.

A.—PRIMARY TRIADS OF THE MAJOR SCALE.

28. **Tonic Triad.**—The tonic (keynote) being the essential (generating) tone of the scale (5—**A**) likewise becomes the fundamental (root) of the essential triad of the scale; namely: the TONIC TRIAD.

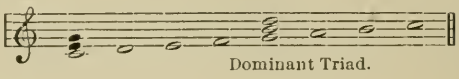


Tonic Triad.

The *tonic triad* then consists of the tonic as *fundamental*, a *major third*, and a *perfect fifth*, which form a *major triad*.

N. B.—In forming triads upon the different tones of a scale, none but the *seven diatonic tones* (4) of the same scale, can be employed.

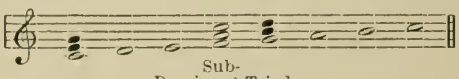
29. **Dominant Triad.**—The triad formed upon the fifth tone of the scale (dominant, 5—**B**) is after the tonic triad the most important. It consists of the dominant as *fundamental*, its *third* (major third), and its *fifth* (perfect fifth), which form a *major triad* called DOMINANT TRIAD.



Dominant Triad.

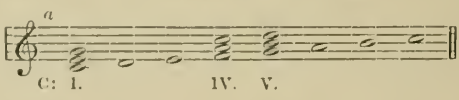
N. B.—The dominant triad (as the term signifies) dominates or governs, on account of its close relation to the tonic triad (see 32—N. B.)

30. **Sub-Dominant Triad.**—The triad based upon the sub-dominant (5—**C**) is after the *tonic* and *dominant triad* the next important triad of the scale. It consists of the sub-dominant as *fundamental*, its *third* (major third), and its *fifth* (perfect fifth), which form, like the preceding two triads (28, 29,), a *major triad* called SUB-DOMINANT TRIAD.

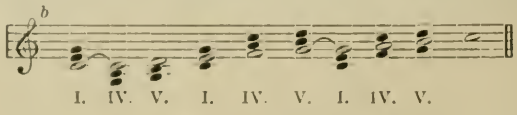


Sub-
Dominant Triad.

31. **Primary Triads.**—The three major triads upon the first (**I.**) degree—*tonic triad*, fourth (**IV.**) degree—*sub-dominant triad*, and fifth (**V.**) degree—*dominant triad*, are the *principal* or PRIMARY TRIADS of the major scale; viz.:



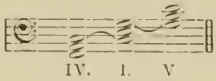
REMARK.—It will be seen in the following example that the seven tones of the diatonic scale (see 4) are found in the three primary triads; the *first* and *fifth* tone of the scale being found in two triads, thus:



The Roman numerals, I, IV, V, refer to the degrees of the scale upon which the triads are formed.

EXERCISE XIII.—Write out the primary triads in all the major scales, as in example at *a*.

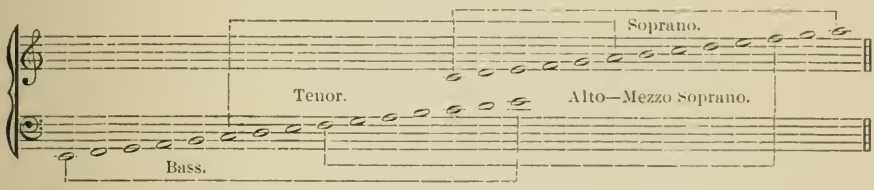
32. **Relation of Primary Triads.**—The employment in a composition of the primary triads is sufficient to establish the major character (or tonality) of the major key (31—Remark). These triads also stand in close relation to each other, which may be illustrated thus:



N. B.—It will be seen that of these three the tonic triad (I. degree) is the center (GENERATING, 5—A) and *concentrating chord*, as its FIFTH forms the *fundamental* of the dominant triad (V. degree), and its FUNDAMENTAL forms the *fifth* of the subdominant triad (IV. degree); thus establishing a close relation between these chords, of which the *tonic triad* is the generating and concentrating harmonic source (see 44).

33. **Four-Part Writing.**—The exercises in harmony must be worked out in four parts. These four parts (or voices) are: the SOPRANO, ALTO, TENOR, and BASS; and are those employed in FOUR-PART CHORUS-WRITING.

34. **Compass of the Voices.**—The vocal compass (or limit) of the different voices, as used in chorus-singing, is as follows:



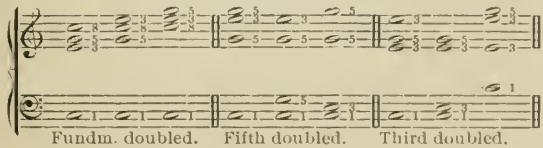
N. B.—The Tenor part may be written in the Treble or in the Bass clef. For our preliminary exercises we will write it in the Treble clef. See 36—Remark.

35. **Outer and Inner Voices.**—The *Soprano* (being the highest or treble voice) and the *Bass* (the lowest) are called OUTER VOICES; the *Alto* and *Tenor* (being between the two outer) are called INNER VOICES.

36. **Doubling of a Tone of a Triad.**—As all exercises in harmony must be worked out for four voices (33) and as the triads consist of but three tones, one of these must be doubled in order to give a tone to each of the four voices.

N. B.—ANY TONE OF A TRIAD MAY BE DOUBLED. The tone of a triad when doubled becomes more conspicuous *as to tone-power;* thus the *sound-balance* of the three tones may easily be disturbed.

MAXIM.—Of the three tones of a triad the FUNDAMENTAL or ROOT (being the tone upon which the chord is based) is better adapted for doubling, as the sound-balance is thereby best maintained, after this the FIFTH, and lastly the THIRD; thus:



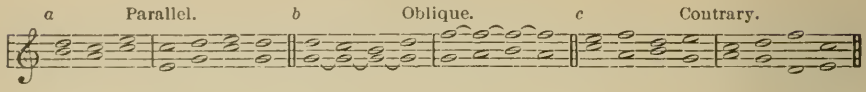
REMARK.—The fundamental (or root) of a chord is generally given to the Bass; thereby giving the harmony a firm foundation. In the foregoing example the Bass therefore always takes the fundamental (C) of the triad, C, E, G. The Bass is written in the Bass clef and the other voices in the Treble clef.

37. Motion of the Voices.—In the progression of the different voices we distinguish three directions of movement; namely:

A.—Direct, similar, or PARALLEL MOTION (*a*);

B.—OBLIQUE MOTION (*b*);

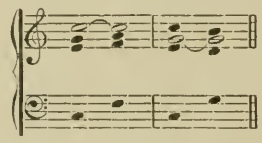
C.—Opposite or CONTRARY MOTION (*c*).



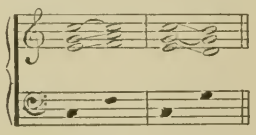
38. Common or Connecting-Tone.—The same tone found in two different triads (32) is called a *common* or CONNECTING-TONE (see 39).

RULES GOVERNING THE CONNECTION OF CHORDS.

39. Rule I.—If in the connection of two different triads a common-tone is found, it should be retained *in the same voice* or *part* in both chords; e. g.:

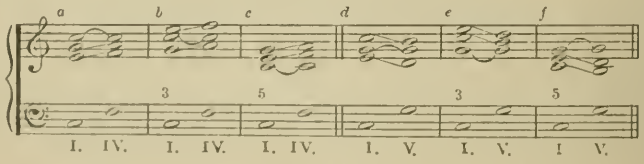


40. Rule II.—The voices taking the other tones of the first chord should move to the *nearest* tones of the next chord; e. g.:



N. B.—The Bass takes the fundamental of each chord (see 36—Remark).

41. Harmony Applied to the Four-Parts.—In the connection of the different triads the *Bass* moves from the fundamental of a chord to the fundamental of the following chord. The other voices are led according to Rule I (39) and II (40). See 36—Remark.

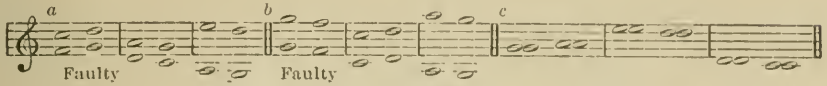


The *Soprano* retains the common-tone at *a* and *f*, the *Alto* retains it at *b* and *d*, and the *Tenor* at *c* and *e*.

REMARK.—The figures 3 and 5 over the Bass-note at the *beginning* of an example, as at *b*, *c*, *e*, *f*, refer to the interval the Soprano (or upper voice) is to begin with. If no figure is placed over the first Bass-note, as at *a* and *d*, the Soprano then begins with the octave (8) of the Bass-note.

EXERCISE XIV.—Write out the connection of the triads I. IV. and I. V., as above, in all the major scales.

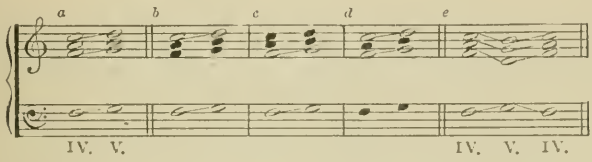
42. Rule III.—A progression in *parallel motion* (37—A) of PERFECT FIFTHS, PERFECT OCTAVES, or UNISONS must be avoided.



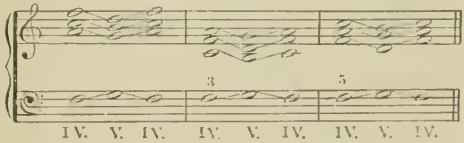
Progression of Perf. Fifths. Prog. of Perf. Octaves. Faulty Prog. of Unisons.

N. B.—These faulty progressions are called PARALLEL FIFTHS, PARALLEL OCTAVES, and UNISONS.

REMARK.—Of all these faulty progressions the *parallel fifth* is the most unsatisfactory. The *parallel octaves* and *unisons* are not objectionable from a melodic standpoint,—as a melody is often doubled in the octave or unison; they are prohibited, however, *in the connection of chords*, where the independent progression of each voice is a chief condition of four-part writing, which would not be the case if two voices were to move in *unison* or *octaves*.

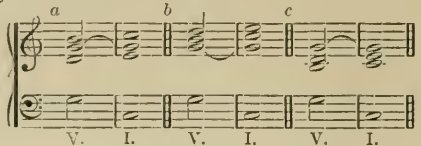
43. Connection of Triads Lacking a Common-Tone.—In the connection of two triads in 41 there is found a common-tone; in the connection of the triad upon the fourth (IV.) degree with the triad upon the fifth (V.) degree there is no common-tone (at *a*).

If these two triads were connected as at *a*, there would be *three errors* according to Rule III. (42), viz.: a *parallel fifth* between Soprano and Bass (*b*), a *parallel octave* between Tenor and Bass (*c*), and a *parallel fifth* between Soprano and Tenor (*d*).

N. B.—The above faulty progressions (which usually occur in the connection of two triads lacking a common-tone) are avoided by leading the upper three voices in *contrary motion* with the Bass, as at *e*.

EXERCISE XV.—Write out the connection of the triads upon the IV., V., IV. degrees, as in example below, in all the major scales. See 41—Remark.

44. Cadence or Close.—The TONIC TRIAD is the triad with which a composition generally begins and *always* ends. There are two of the primary triads (31) which, when brought in connection with the tonic triad, distinctly suggest a feeling of *approaching rest* or: THE CLOSE. These are: the DOMINANT and SUB-DOMINANT.

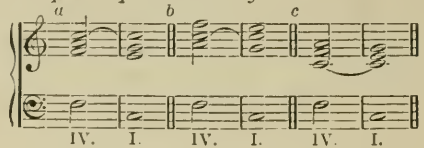
N. B.—A succession of triads indicating this rest or *close* is termed a CADENCE, or CLOSE (see 45, 46,).

45. Authentic Cadence.—The *dominant triad especially*, in connection with the tonic triad (the succession of the chords **V. I.**) creates a distinct impression of close or ending: *if the tonic triad falls upon the principal accent* (down beat) *of a measure;* thus:



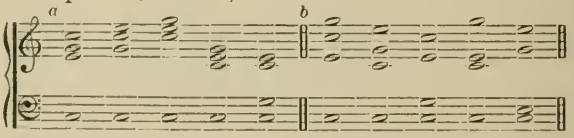
N. B.—The succession of the two triads **V. I.** (Dominant-Tonic) thus employed forms the AUTHENTIC CADENCE or AUTHENTIC CLOSE (*authentic* signifying real or approved).

46. Plagal Cadence.—The succession of the triads **IV. I.** (Subdominant-Tonic) likewise suggests this feeling of close, if (as in **45**) *the tonic triad falls upon the principal accent of a measure;* thus:



N. B.—This form of the close is not as decided as the succession of triads **V. I.**; and is consequently called a PLAGAL CADENCE or PLAGAL CLOSE (from *plagius*—alongside or collateral).

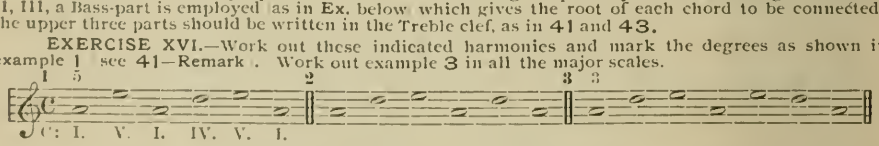
47. Close and Open Position of a Chord.—If, in the three upper voices, the intervals of a chord appear close to each other, as at *a*, the chord is then considered to be in CLOSE POSITION; if the three upper voices are scattered or dispersed, as at *b*, the chord is then in OPEN POSITION.



N. B.—The different positions of the three upper voices do not change the fundamental character of the chord, as the tones are always the same; namely, C, E, G; the Bass always taking the *same root*, C.

REMARK.—For the purpose of exercise in connecting the primary triads according to Rules I, II, III, a Bass-part is employed (as in Ex. below) which gives the root of each chord to be connected; the upper three parts should be written in the Treble clef, as in **41** and **43**.

EXERCISE XVI.—Work out these indicated harmonies and mark the degrees as shown in example 1 (see **41**—Remark). Work out example 3 in all the major scales.

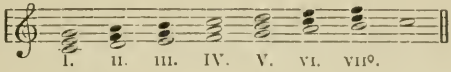


QUESTIONS TO CHAPTER I.—A.

28—**25.** Of what intervals does a triad consist? 29—**25.** Which is the fundamental or root of a triad? 30—**26.** Of what intervals does a major triad consist? 31—**27.** What intervals form a minor triad? 32—**31.** Upon what degrees of the scale are the primary triads formed? 33—**28, 29, 30.** What technical term is given to each of the primary triads? 34—**28, 29, 30.** What kind of triads are the primary triads? 35—**33.** What voices are employed in four-part writing? 36—**35.** Which are the outer and which the inner voices? 37—**36.** Which tone of a triad is best adapted for doubling? 38—**37.** What is parallel motion, oblique motion, and contrary motion of the voices? 39—**38.** What is a connecting or common-tone? 40—**39.** What is the first rule in chord-connection? 41—**40.** What is the second rule in chord-connection? 42—**41.** Which tone of a triad is generally given to the Bass? 43—**42.** What is the third rule in chord-connection? 44—**42.** What is a parallel octave, fifth, and unison? 45—**43.** What motion of the voices is used to avoid parallel octaves, fifths, and unisons? 46—**44.** With what triad does a composition close? 47—**45, 46.** How many cadences do we employ, and what are they termed? 48—**45.** What succession of triads forms the authentic close? 49—**46.** What succession of triads forms the plagal close?

B.—COLLATERAL TRIADS OF THE MAJOR SCALE.

48. Collateral Triads.—The PRIMARY TRIADS (31) are formed upon the first (I.), fourth (IV.), and fifth (V.) degrees of the diatonic scale. The triads formed upon the second (II.), third (III.), sixth (VI.), and seventh (VII°.) degrees of the scale are called COLLATERAL or SECONDARY TRIADS.

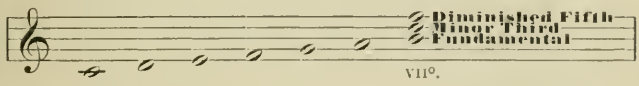


N. B.—The collateral triads do not so distinctly fix the character of the major scale as do the primary triads (32), hence they are called *collateral* or *secondary triads.*

REMARK.—The degrees of the scale upon which the triads are formed are indicated by large Roman numerals for the *major triads* and smaller numerals for the *minor triads.*

49. Minor Triads of the Major Scale.—Of the collateral triads those formed upon the II. degree—SUPER-TONIC; III. degree—MEDIANT; and VI. degree—SUB-MEDIANT of the major scale (5—F, D, E,) are minor triads (27).

50. Diminished Triad.—The triad formed upon the VII. degree—LEADING-TONE (5—G) of the scale consists of a *minor third* and a DIMINISHED FIFTH, and is consequently called a DIMINISHED TRIAD, on account of the *diminished fifth.*



REMARK.—The degree mark (°) is added to the numeral VII to indicate the diminished character of the triad upon the seventh degree. See 48—Remark.

EXERCISE XVII.—Write the triads of the major scale, as also the degrees (numerals), in all the major scales, as in 48.

51. Concords.—Concords are triads formed of consonant intervals (22) only. All MAJOR and MINOR TRIADS are *concords*, being formed only of consonant intervals.

The major scale contains *six* concords, viz.:

A.—Three major triads—upon the I., IV., and V. degree;

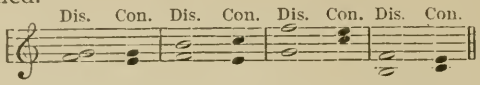
B.—Three minor triads—upon the II., III., and VI. degree.

N. B.—Concords are *independent chords.* They require no definite resolution but connect satisfactorily with any other concord of the scale.

52. Discords.—Discords are chords that contain *one* or *more* dissonant intervals (23). Discords are consequently *dependent chords:* dependent on a connection with concords in order to satisfy their dissonant inclinations (53).

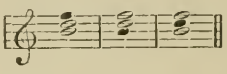
N. B.—The only discord found in the major scale is the diminished triad (50), which contains *one* dissonant interval, namely; the *diminished fifth.*

53. Resolution of a Dissonance.—The dissonant intervals (23) have an unsatisfactory harmonic relation which necessitates a connection with consonant intervals in order that their inherent tendency for progression may be satisfied.



N. B.—The natural connection of a dissonant interval with the consonant interval toward which it inclines (as above) is called RESOLUTION OF A DISSONANCE.

54. Resolution of the Diminished Triad.—The diminished triad embraces three intervals, namely: two minor thirds—B to D and D to F, and one diminished fifth—B to F.



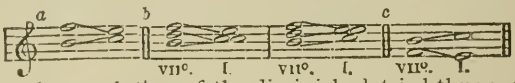
The minor thirds are consonant intervals, and do not require resolution. The diminished fifth, however, is a dissonant interval which demands definite resolution.

The *regular resolution* of the diminished triad results as follows:

A.—The FUNDAMENTAL (leading-tone) moves a diatonic half-step up to the tonic (keynote);

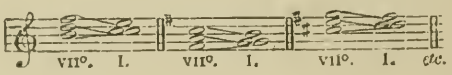
B.—The DIMINISHED FIFTH moves down *one diatonic degree* (*a*);

C.—The THIRD (being a consonant interval) moves one degree up or down (*b*).



N. B.—The regular resolution of the diminished triad thus naturally results into the tonic triad, as at *b*. The augmented fourth (TRITONE, 13—C, N. B.) which results through the inversion of the diminished fifth, resolves (as a dissonant) into the same intervals of the tonic triad (*c*).

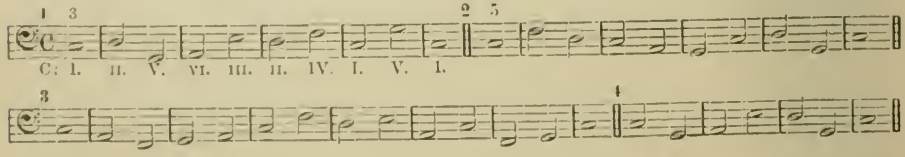
EXERCISE XVIII.—Write out the regular resolution of the diminished triad, in all the major scales, as follows:



55. Conjunct-Disjunct Movement of the Voices.—*Conjunct movement* (from *conjunctus*—joined together) is a progression of the voices by degrees; *disjunct movement* (*disjunctus*—disjoined, separated) is a progression of the voices by skips.

N. B.—The three upper voices: Soprano, Alto, Tenor, should as much as possible employ the *conjunct movement*. The Bass generally progresses in disjunct movement (41).

EXERCISE XIX.—The given Bass below should be worked out as in Ex. XVI, 47. The degrees numerals must be carefully marked. For example in connection of chords see 60.

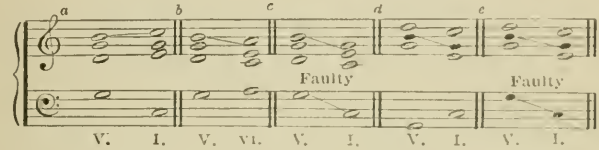


56. **Leading Tone.** — The leading-tone (*nota sensibilis* — sensitive note of the scale, 5—G) possesses certain characteristics which make a careful consideration of its use in four-part writing necessary. These characteristics are · its *tone-power* and its *melodic tendency*.

A —The TONE-POWER of the leading-tone is more pronounced than that of any other tone of the scale. In four-part writing the leading-tone is consequently not adapted for doubling, as the other tones of a triad would thereby be weakened in sound-volume. (See 36—N. B.)

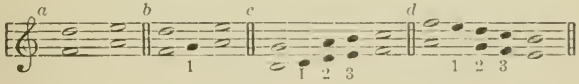
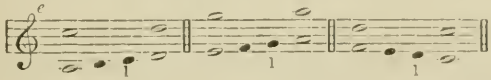
RULE IV. — THE LEADING-TONE SHOULD NOT BE DOUBLED IN FOUR-PART WRITING.

B.—The MELODIC TENDENCY of the leading-tone is upward, a diatonic half-step, to the tonic (keynote) *a*. It may, however, also *move one degree downward*, *b*.



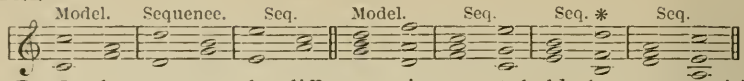
MAXIM.—THE LEADING-TONE SHOULD NOT *skip* DOWN IN THE OUTER VOICES IN THE CONNECTION OF THE CHORDS, V—I (authentic cadence—45) at *c*; it may *skip down in the middle voices*, where the upward tendency of the leading-tone is not so noticeable, *if the Bass progresses in contrary motion* (as at *d*), so as to avoid *covered fifths* (as at *e*). See 57.

57. **Covered Fifth and Octave Progressions.** — Rule III (42) prohibits the progression in parallel motion of perfect (or parallel) fifths and octaves. In the foregoing section (56—Maxim) there is mentioned faulty progression of *covered fifths*.

A.—COVERED FIFTHS occur whenever any two voices move from an interval in *parallel motion* into a *perfect fifth* (*a*), whereby one or more fifths are concealed or covered (by skipping over them), and they are called COVERED FIFTH PROGRESSIONS (*b*, *c*, *d*,). The small notes give the fifths which are covered.

B.—COVERED OCTAVES occur whenever any two voices move from an interval in *parallel motion* into a *perfect octave* (*e*), thus skipping over one or more octaves; such are called COVERED OCTAVE PROGRESSIONS.

N. B.—A progression of covered fifths and octaves, containing but *one* covered fifth or octave, is not objectionable in four-part writing; but those containing more than one covered fifth or octave are very unpleasant.

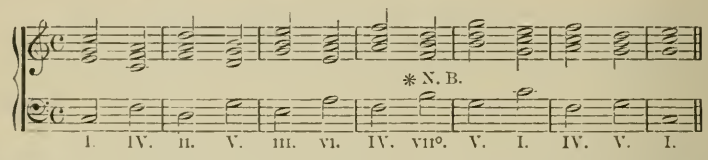
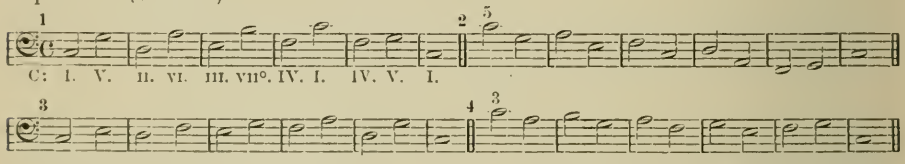
MAXIM.—Progressions of covered fifths and octaves are allowed *if one voice moves by degrees and the other skips* (*b*, *e*,). They are to be avoided *if both voices skip* (*c*, *d*,).

58. Sequence. A sequence (from *sequi*—a following, or that which follows) is an imitation or continuation *in regular intervals* of a PHRASE or MODEL.



N B.—In the sequence the different voices must hold the same position and relation to each other that they held to each other in the *model*. This causes, at times, a relaxation of the rules of connection and progression, as is the case, for example, in the resolution and progression of the intervals of the diminished triad (54), which occurs at *.

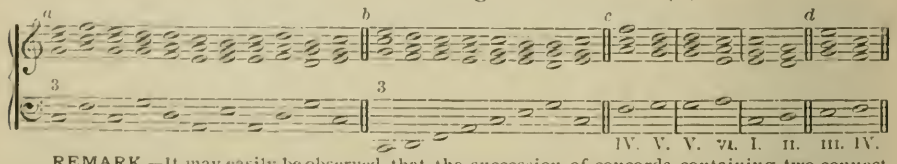
The regularity in the progression of the different voices in the sequence gives it its satisfactory character, and smooths over an occasional irregular connection or progression. *Parallel fifths and octaves*, however, *are absolutely prohibited.*

EXERCISE XX.—Work out the given Basses below in sequences, as shown in the following example:

MAXIM.—The doubling of the leading-tone (in the triad upon the VII° degree), as also the progression of an augmented fourth (at * N. B.), is allowed only in the sequence. (See 59.)

59.—Tritone.—The step of an augmented fourth (which occurs between the fourth and seventh tone of the major scale, **Ex. XX—N. B.**) embraces three major seconds; it is consequently called TRITONE (*tri*—three, and *tonus*—tone). (See 13—C, N. B.)

N. B.—The two tones constituting the *tritone* (fourth and seventh of the scale), form an *unmelodious* step if sounded in succession, and also an *unharmonious* (dissonant) relation if sounded simultaneously (see 54—N. B.).

MAXIM.—In the progression of the voices in chord connection the augmented fourth (tritone) should be avoided. (See 58—Maxim.)

60. Relation of Concords.—Concords containing *one* common-tone (*a*) have a more satisfactory harmonic relation than those containing *two* common-tones (*b*), while the connection of concords lacking a common-tone is satisfactory only in some instances, as: IV V., V. VI., I. II. (*c*); the connection of the triads III. IV. being the most rare (*d*).

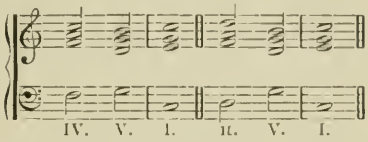


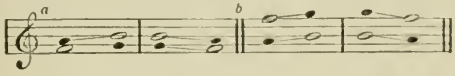
REMARK.—It may easily be observed that the succession of concords containing two connecting tones sound somewhat weak in their harmonic connection (at *b*), while a succession containing one common-tone sounds more emphatic, harmonically, more decisive (at *a*); *a succession of concords* lacking a common-tone (at *c*) have the character of rugged firmness.

61. **Extended Authentic Cadence.**—The two simple cadences are mentioned in 45 and 46. The simple *authentic cadence* (V. I.) may be extended by adding another triad, thus forming the authentic close with three triads. Two triads of the scale are especially adapted, on account of their close relation to the dominant triad, to form this extension. These are: the sub-dominant triad (IV.) and the super-tonic triad (II.).

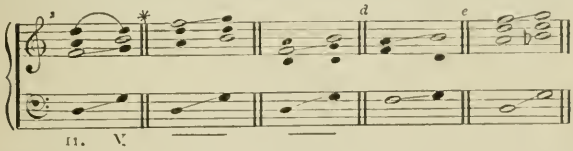
We have thus two forms of the extended close, viz.:

A.—Sub-dominant—Dominant—Tonic: IV. V. I.

B.—Super-tonic—Dominant—Tonic: II. V. I.

REMARK.—In the foregoing connection of the chords, II. V., it will be seen that the common-tone D which occurs in the two chords *is not retained in the same voice* (see 39). This was done to avoid the unpleasant relation of the TRITONE (59—N. B.), or its inversion, the diminished fifth (54—N. B.), which is distinctly noticeable in four-part harmony (*c*), more so in three-part harmony (*d*), and is altogether prohibited in two-part counter-point (*a*, *b*,). It always occurs between two voices moving a *whole step* up or down in major thirds (*a*) or minor sixths (*b*). Although the TRITONE appears neither in the same voice nor is it sounded simultaneously, nevertheless its *unpleasant relation* can be distinctly noticed in these examples.



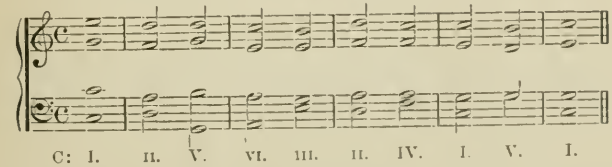
In *four-part harmony* this progression of major thirds forming the *tritone*, as at *a*, or minor sixths, forming the diminished fifth (at * and *b*), is in some instances very objectionable; as:



Some theorists have attributed these unpleasant progressions to the *covered octaves* (57—B) contained in the examples at *c*. If this were the real cause the covered octaves found in 57—B would be equally objectionable, which is not the case, however. That the unpleasantness does not lie in the covered octaves, but in the TRITONE, may be easily observed by playing the example at * and then the example at *e*, in the latter the covered octave is still found, but the TRITONE is avoided by changing the B to B♭. See 63—Remark.

EXERCISE XXI.—Write the two forms of the above extended cadences in all the major scales

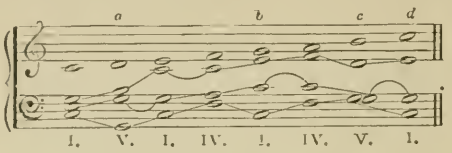
62. **Harmony in Open Position.**—A succession of chords in open position (see 47) enables the four voices (33) to move with more freedom than is the case if in close position; e. g.:



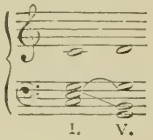
N. B.—As the Tenor (if placed in the Treble clef) comes, at times, to lie too high (as in example in Ex. XX., 58,), it may be placed in the Bass clef, as above, in order to keep it within its vocal compass (34).

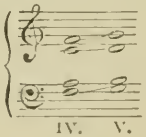
EXERCISE XXII.—Write the given Bass in Ex. XIX. in open position, as shown above.

63. Harmonization of the Major Scale with Primary Triads.— The seven tones of the major scale are contained in the three primary triads (31—Remark). By placing the scale (as a *melody*) in the Soprano, as below, we may add the other parts, which is called HARMONIZING A MELODY. The scale is thus harmonized with the three *primary triads;* e. g.:



The foregoing ascending scale is the *melody*, which should not be altered. The Alto is placed in the Bass-clef in the first two chords, for the sake of more *convenient notation.*

REMARK.—At *a* the Alto moves from G (which, as common-tone, ought to have been retained, according to Rule I.—39) to B, a third up. This license is justified in this case, as the harmony is brought closer to the melody, thereby giving it more transparency and clearness. This would not have been attained if the G in the Alto had been retained as common-tone, thereby forcing the Tenor to move to B below; thus bringing the harmony too near the Bass, which sounds too heavy; e. g.:

At *b* the G in the scale gives us the choice between the tonic triad (C, E, G,) and the dominant triad (G, B, D,). But as the Soprano moves from the F to the G, the tonic triad is preferable to the dominant triad, as the Bass would (if the dominant triad were employed) likewise move from F up to G which would give us parallel octaves, thus:



At *c* the Soprano holds the leading-tone, which is found in the primary triads only in the dominant. The Bass moves from F to G; the Alto is thus obliged to move to D, in order to avoid a parallel octave with the Bass. The Tenor cannot proceed to D as this would produce parallel fifths with the Bass; nor down to the B, which would be doubling the leading-tone (Rule IV.—56); it can, consequently, only move down a fourth, to the fundamental, G. The progression of the Alto and Tenor thus gives us a *covered fifth* (57—A), which is not as objectionable in the middle parts as it would be in the outer parts.

At *d* the tonic triad appears in open position (62). This open position of the tonic triad could not be avoided on account of the open position of the dominant chord preceding.

EXERCISE XXIII.—Harmonize all the major scales as in example above.

QUESTIONS TO CHAPTER I.—B.

50—**48.** Upon which degrees of the major scale are the collateral triads formed? 51—**49.** Upon which degrees of the major scale are the minor triads formed? 52—**50.** Upon which degree of the major scale is the diminished triad found? 53—**50.** What intervals compose a diminished triad? 54—**51.** What is a concord? 55—**51.** Which triads of the major scale are concords? 56—**52.** What is a discord? 57—**53.** What is a resolution of a dissonance? 58—**54.** Which is the regular resolution of the intervals of the diminished triad? 59—**54.** Which chord of the scale does the diminished triad resolve to? 60—**55.** What is a disjunct and a conjunct movement of a voice? 61—**56.** Which are the two characteristics of the leading-tone? 62—**56.** Which are the two rules regarding the doubling and the melodic tendency of the leading-tone? 63—**57.** What is a covered fifth and octave progression? 64—**57.** Which covered fifths and octaves are allowed? 65—**58.** What is a sequence? 66—**59.** What is a tritone? 67—**59.** What is the rule regarding the tritone? 68—**61.** Which succession of triads constitutes the two forms of the extended cadence?

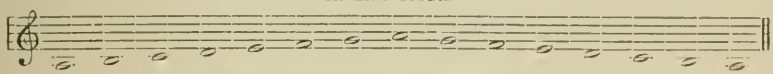
Chapter II.

THE TRIADS OF THE MINOR SCALE.

64. The Minor Modes.—The science of music employs two different modes (or forms) of the minor scale. Both of these modes have a certain artificial formation, in so far as some of the seven tones of the scale are chromatically altered (6), without such alteration being indicated in the key-signature.

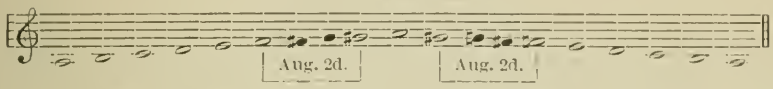
A.—The seven tones of the minor scale, *as indicated by the key-signature*, form one of the *authentic modes* of the Greeks: namely, the ÆOLIAN MODE. This scale lacks the leading-tone (5—G); e. g.:

ÆOLIAN MODE.



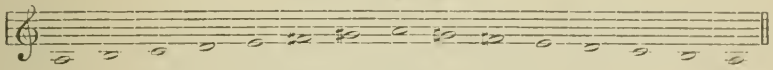
B.—In the HARMONIC MINOR SCALE the *seventh* is chromatically raised, ascending and descending, which gives us the leading-tone, but also an unmelodious step of an *augmented second* (11—C) between the sixth and seventh; thus:

HARMONIC MINOR SCALE.



C.—In the MELODIC MINOR SCALE the *sixth* and *seventh* are raised in ascending and again lowered in descending; thus the augmented second is avoided and the leading-tone retained (ascending only), which makes this minor mode more satisfactory from the standpoint of melody.

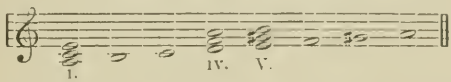
MELODIC MINOR SCALE.



65. The Harmonic Minor Scale.—In forming the chords of the minor scale we employ the seven tones of the HARMONIC MINOR, not the *melodic minor scale*. Of the latter mention will be made in 123.

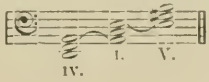
The peculiarities of the harmonic minor scale (*chromatically raised seventh* and *augmented second*) will receive special consideration in 67—N. B. and 73.

66. Primary Triads.—The primary triads of the minor scale are formed (like those of the major scale—31) upon the *first* (I.), *fourth* (IV.), and *fifth* (V.) degree of the *harmonic minor scale;* viz.:



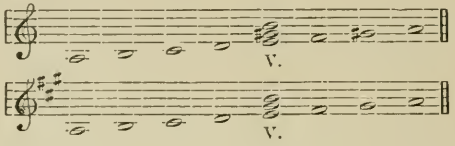
The triads formed upon the *first degree*—TONIC TRIAD, and *fourth degree*—SUB-DOMINANT TRIAD, are minor triads; the triad formed upon the *fifth degree*—DOMINANT TRIAD, is a major triad.

N. B.—The PRIMARY TRIADS of the minor scale express the *minor character* of the minor scale as definitely as the primary triads of the major scale express the *major character* of the major scale. These primary triads have also the same close relation to each other as those of the major scale (32); viz.:

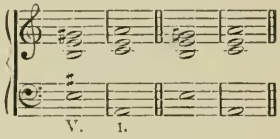


67. Dominant Triad of the Minor Scale.—The *dominant* (dominating or governing triad, 29—N. B.) is the triad which brings the other triads of the scale in closer relation with the tonic triad (**45**).

The dominant triad of the minor scale is composed of the same intervals as those of the dominant triad of the major scale; namely, a *major third* and a *perfect fifth*—thus forming a MAJOR TRIAD; e. g.:

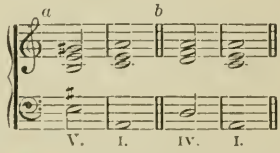


N. B.—The chromatic raising of the seventh (leading-tone) of the harmonic minor scale (64—B) is particularly required for the purpose of constructing a *major triad* upon the fifth degree—*dominant triad*—as without a major triad upon this (V.) degree the authentic cadence (68) would be unsatisfactory; for example:

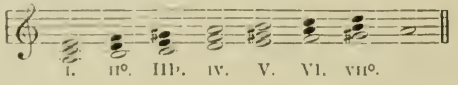


68. Authentic and Plagal Cadence of the Minor Scale.—The two simple cadences of the minor scale are formed of the same succession of triads as those of the major scale (**45, 46,**); namely:

AUTHENTIC CADENCE—V. I.: Dominant—Tonic (*a*);

PLAGAL CADENCE—IV. I.: Sub-dominant—Tonic (*b*).

REMARK.—As the chromatically raised seventh of the harmonic minor scale is not indicated by the key-signature (64—B), it will be necessary to indicate it by a sign over the Bass, as at *a*. Any chromatic sign (♮, ×, ♯, ♭, ♭♭,) above a Bass-note as at *a*, *always* refers to the THIRD of the note in the Bass, which must be raised or lowered as the sign may indicate.

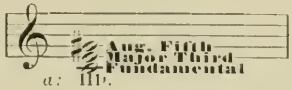
69. Collateral Triads of the Minor Scale.—The collateral (or secondary) triads of the minor scale are formed, like those of the major scale (48), upon the second (II.°), third (III.'), sixth (VI.), and seventh (VII.°) degree of the scale; thus:



N. B.—The triads upon the II.° and VII.° degree are *diminished triads* (50); the triad upon the VI. degree is a *major triad*. The triad upon the III.' degree is explained in 70.

REMARK.—The meaning of the numerals indicating the degrees of the scale have been explained in 48. 50—Remarks.

70. The Augmented Triad.—The triad found upon the third degree of the minor scale (69) consists of a *fundamental*, a *major third*, and an AUGMENTED FIFTH; thus forming a combination of intervals called the AUGMENTED TRIAD—so called on account of the augmented fifth; e. g.:



N. B.—The augmented triad is the most discordant of all the triads (see 72).

REMARK.—The augmented triad, in order to distinguish it in the numerals indicating the degrees from the other triads of the scale (69), receives a large numeral with a comma.

EXERCISE XXIV.—Write out the triads of the minor scale, as in example in 69 in all the minor scales. The Roman numerals indicating the degrees must be carefully marked.

71. Concords and Discords of the Minor Scale.—The major scale contains *six* concords (51) and *one* discord (52), while the minor scale contains but *four* concords and *three* discords; viz.:

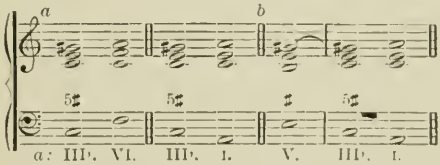
CONCORDS.—The *minor triads* upon the I. and IV. degree and the *major triads* upon the V. VI.;

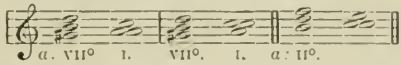
DISCORDS.—The *diminished triads* upon the II.° and VII.° degree and the *augmented triad* upon the III.'

N. B.—The concords require no particular resolution (51—N. B.), as their consonant (independent) character permits of their easy connection with other concords (60); the discords, however, require definite resolution (52).

72. Resolution of the Discords of the Minor Scale.—The extremely dissonant character of the *augmented triad* (70—N. B.) makes its *connection* with other chords, as also its *introduction*, unsatisfactory and harsh.

A.—The *augmented fifth* in the AUGMENTED TRIAD (being the real dissonant interval and leading-tone—56) moves a diatonic half-step upwards to the keynote: *tonic* (at *a*).

The INTRODUCTION of the augmented triad will be less harsh if the augmented fifth (which is the dissonant interval) is held over (in the same voice) from the preceding chord, so that the tone which forms the augmented fifth (the dissonant) is *prepared* (*b*).

B.—The resolution of the *diminished triad* upon the seventh degree (leading-tone) as also that upon the second degree, is the same as that upon the seventh degree in the major scale (54); namely: *fundamental*, a diatonic half-step up; *fifth*, a diatonic degree down; *third*, a degree up or down, as:



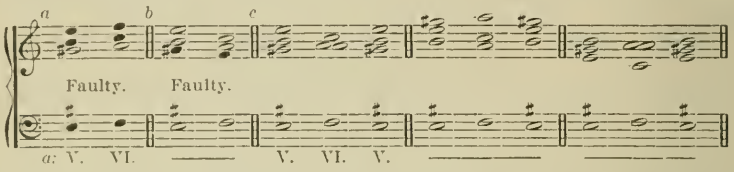
N. B.—The *fundamental* of the diminished triad upon the second (II.°) degree may be doubled, as it is not the leading-tone (see 75—B).

REMARK.—A ♯, X, or a ♮ after a number (as at *a*, *b*,) shows that the tone indicated by the figure should be raised

73. **The Augmented Second.**—The interval of the augmented second between the *sixth* and *seventh* degree of the harmonic minor scale (64—B) is considered an unmelodious progression (or step) in *chord-connection*, not so, however, if it occurs in melody.

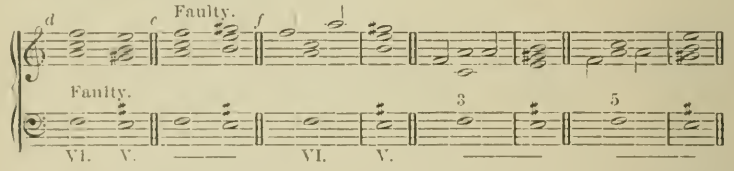
RULE V.—The progression of an augmented second *upward* or *downward* in any voice should be avoided in chord-connection *if the two tones* (forming the augmented second) *belong to different chords* (see 74).

74. **Connection of the Triads V. VI. of the Minor Scale.**—In the connection of the two major triads of the minor scale—dominant with sub-mediant (V. VI.) the common-tone is lacking (43); the voices must consequently be led in contrary motion with the Bass, in order to avoid *parallel fifth* and *octave progressions* (42). Besides these errors, we have also to observe the rule regarding the *augmented second* (73), which always occurs between these triads.



At *a* the connection is faulty on account of the *parallel fifth* between the Bass and Alto, and the *parallel octave* between the Bass and Soprano. At *b* there is a faulty progression of an augmented second in the Tenor.

MAXIM.—In the connection of the triads upon the V. VI. degree, the faulty progressions can be avoided *by doubling the* THIRD *of the triad upon the* VI. *degree* (as at *c*).

N. B.—In the connection of the triad upon the VI. with the triad upon the V. degree it will be necessary to take out the octave of the *fundamental* of the triad upon the VI. degree (if it is contained in an upper voice) in order to avoid either a parallel octave or an augmented second; as:

At *d* and *e* the fundamental of the triad upon the VI. degree is doubled (Bass and Soprano). The octave of the fundamental in the Soprano must consequently either move down, as at *d*,—which is a parallel octave with the Bass,—or move up, as at *e*,—which is a faulty step, being an augmented second.

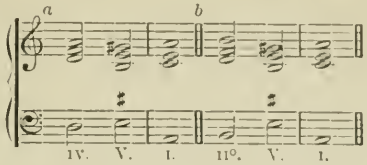
In order to avoid both these errors it will be necessary to take out the octave of the fundamental and move up to the third of the same chord, which will double the third of the triad upon the VI. degree, as at *f*. See Maxim.

REMARK.—The connection of the triad upon the VI. degree with the triad upon the V. degree of the minor scale is the most difficult for the student on account of the resulting *parallel fifths*, *parallel octaves*, and the faulty step of the *augmented second*, which always occur in the connection of these two triads. The student should therefore work out the following Ex. very carefully, not in a mechanical manner, by copying.

EXERCISE XXV.—Write out the connection of the triads upon the V. VI. degree, as at *c*, and VI. V. degree, as at *f*, in all the minor scales.

75. Extended Cadences of the Minor Scale.—We have in the minor scale (as in the major scale, **61,**) two forms of the extended authentic cadence; namely:

A.—First Form: IV. V. I.—Sub-dominant—Dominant—Tonic (*a*);

B.—Second Form: II.° V. I.—Super-tonic—Dominant—Tonic (*b*). See Remark.

REMARK.—The regular resolution of the diminished triad upon the II.° degree is explained in **72**—B and N. B.; the foregoing resolution (*b*) is irregular, but very effective in the cadence.

EXERCISE XXVI.—Write out the two forms of the extended cadence in all the minor scales.

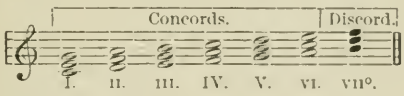
76. Fundamental Triads.—The triads of the major (**31, 48,**) and minor scales (**66, 69,**) thus far treated of, are all *fundamental triads;* so termed because the Bass (or lowest voice) always takes the fundamental of a triad, which gives us the *fundamental position* of a chord, or FUNDAMENTAL CHORD. This can not be gained by any other means.

N. B.—Fundamental Triads give a succession of chords, a *firmness* and *solidity* of foundation (see **60**). The fundamental triads of the major and minor scale are:

A.—Triads of the major scale:

Concords { —MAJOR TRIADS upon the I. IV. and V. degree;
—MINOR TRIADS upon the II. III. and VI. degree.

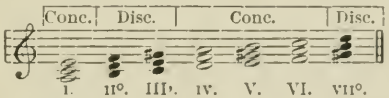
Discord—DIMINISHED TRIAD upon the VII.° degree.



B.—Triads of the minor scale:

Concords { —MAJOR TRIADS upon the V. and VI. degree;
—MINOR TRIADS upon the I. and IV. degree.

Discords { —DIMINISHED TRIADS upon the II.° and VII.° degree;
—AUGMENTED TRIAD upon the III.' degree.



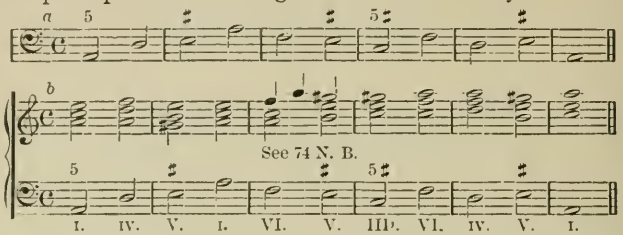
EXERCISE XXVII.—Form *major*, *minor*, *diminished*, and *augmented triads* upon each of the following tones: C, F, B, D, G, B', F♯.

77. Pure Four-Part Writing.—The progression of the four voices (**33**) in chord-connection in conformity with the rules thus far laid down is termed PURE FOUR-PART WRITING.

N. B.—The rules of Pure Four-Part Writing constitute the basis of all forms of composition. A facility in Pure Four-Part Writing can be acquired only by a great deal of practice in chord-connection.

78. Figured Bass—Thorough Bass. — The term *figured Bass* is applied to a Bass-part over or under which are marked the signs and figures referring to the intervals of the chord indicated by the note in the Bass, as at *a*. *Thorough Bass* is the science of working out the *figured Bass* according to the principles of harmony.

The example at *a* gives us a figured Bass in a minor key, which is worked out at *b* according to the principles of "Thorough Bass" or "Harmony."

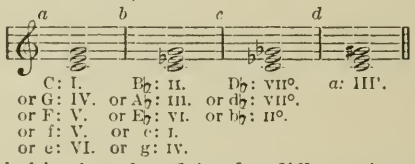


79. Uncertain Location of a Triad. — The *major*, *minor*, and *diminished triad* have no definite location; the *augmented triad* has; e. g.:

A MAJOR TRIAD is formed upon the I. IV. and V. degree of a major scale, and upon the V. and VI. degree of a minor scale (*a*).

A MINOR TRIAD is formed upon the II. III. and IV. degree of a major, and upon the I. and IV. degree of a minor scale (*b*).

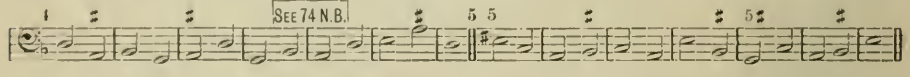
A DIMINISHED TRIAD is formed upon the VII.° degree of a major and upon the II.° and VII.° degree of a minor scale (*c*).

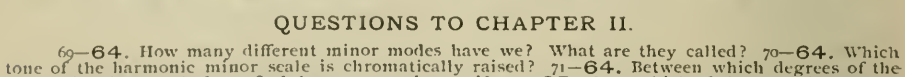


N. B.—A *major triad* is thus found in *five* different keys (*a*); a *minor triad* in *five* different keys (*b*); a *diminished triad* in *three* different keys (*c*); and an *augmented triad* in one scale only (*d*). The latter is the only triad which has a definite location.

REMARK.—The large letters have reference to the major and the small letters to the minor scales.

EXERCISE XXVIII.—Work out the figured Bass below. Particular attention must be given to the connection of the triads VI. V. VI. See 74.





QUESTIONS TO CHAPTER II.

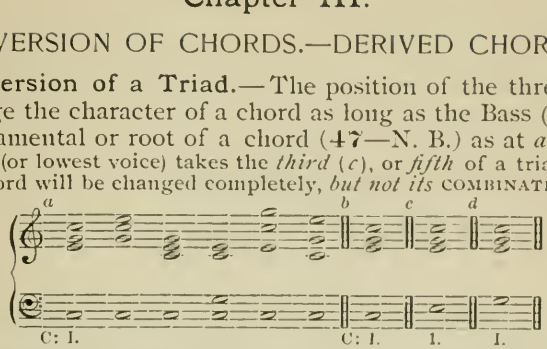
69—64. How many different minor modes have we? What are they called? 70—64. Which tone of the harmonic minor scale is chromatically raised? 71—64. Between which degrees of the harmonic minor scale do we find the augmented second? 72—65. Upon which of the two minor scales do we form the harmony? 73—66. Upon which degrees do we find the primary triads? 74—66. What kind of triads are the primary triads? 75—67. What intervals form the dominant triad of the major and minor scale? 76—69. Upon which degrees do we find the collateral triads? 77—69. What kind of chords are the collateral triads? 78—70. What intervals constitute the augmented triad? 79—71. Which triads of the minor scale are concords, and which discords? 80—72. How do we resolve the augmented fifth? 81—73. What is the rule regarding the augmented second? 82—75. Which succession of triads constitutes the two forms of the extended cadences? 83—76. What are fundamental chords? 84—79. Upon which degrees of the major and minor scale do we find major triads? 85—79. Upon which degrees of the major and minor scale do we find minor triads? 86—79. Upon which degrees of the major and minor scale do we find diminished triads?

Chapter III.

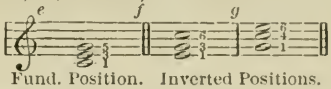
INVERSION OF CHORDS.—DERIVED CHORDS.

80. Inversion of a Triad.—The position of the three upper voices does not change the character of a chord as long as the Bass (or lowest part) takes the fundamental or root of a chord (47—N. B.) as at *a*, *b*.

If the Bass (or lowest voice) takes the *third* (*c*), or *fifth* of a triad (*d*), the CHARACTER of the chord will be changed completely, *but not its* COMBINATION OF TONES.



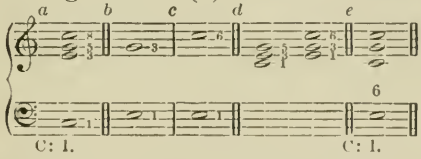
In the *fundamental position* of a chord (76) the regular order of the intervals is 1-3-5 (*e*). If the order of the intervals becomes changed (inverted, 19) by placing the *third* below, it (the third) then is counted as first-tone—being the lowest (*f*). If the fifth of a triad is placed below, it (the fifth) then becomes the first (or lowest) tone, as at *g*.



Fund. Position. Inverted Positions.

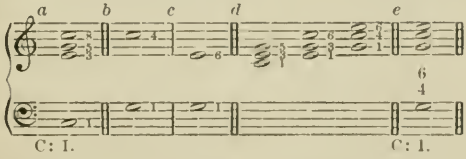
N. B.—If the *fundamental* of a triad is in the Bass (or lowest voice), we have the FUNDAMENTAL POSITION (*e*), if the *third* (*f*) or *fifth* (*g*) is placed in the Bass (or lowest voice), we obtain two other forms of the same chord, which are called INVERSIONS OF A TRIAD.

81. Six-Chord—First Inversion.—If the THIRD of a triad is placed in the Bass, the *fifth* of the original triad (*a*) will then become third (*b*), and the *fundamental* of the original triad (*a*) will become sixth (*c*) of the Bass-note.



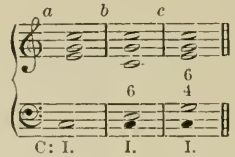
N. B.—If the *third* of a triad is placed in the Bass, we obtain the *first inversion* of a triad, which gives the order of intervals 1-3-6 (*d*). The first inversion of a triad is called SIX CHORD, because the *fifth* and *root* of the original chord becomes *third* and *sixth* of the BASS-NOTE (*d*, *e*,).

82. Four-Six Chord—Second Inversion.—If the FIFTH of a triad is placed in the Bass, the *fundamental* (root) of the original triad (*a*) will become fourth (*b*), and the *third* of the original triad (*a*) sixth (*c*) of the Bass-note.



N. B.—If the *fifth* of a triad is placed in the Bass we obtain the SECOND INVERSION of a triad, which gives the order of intervals 1-4-6 (*d*). The second inversion of a triad is called FOUR-SIX CHORD, because the fundamental and third of the original chord become the *fourth* and *sixth* of the BASS-NOTE (*d*, *e*,).

EXERCISE XXIX.—Write out six triads in the three positions, as in **80**, at *e*, *f*, *g*.

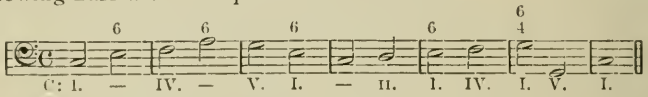
83. Derived Chords. — The *six chord* (81) and the *four-six chord* (82) are not fundamental but inversions of fundamental chords (80—N. B.). Although the Bass takes the different tones of a triad (*a, b, c,*), nevertheless the chord is not changed, as the tones employed are always the same, viz.: C, E, G, which form the C major triad, the fundamental of which is always C; e. g.:

N. B.—The *six chord* and the *four-six chord*, which derive their origin from a fundamental chord (80—N. B.) through its inversion (*b, c,*), are called DERIVED CHORDS.

MAXIM.—In the *six chord* the FUNDAMENTAL IS GENERALLY DOUBLED, not the Bass-note (*b*); in the *four-six chord* THE BASS-NOTE IS GENERALLY DOUBLED, not the fundamental (*c*).

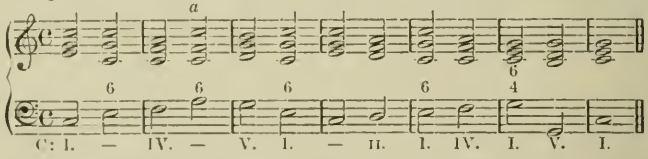
REMARK.—The six chord is indicated in the figured Bass (78) by a 6 over or under the Bass-note; and the four-six chord by a $\frac{6}{4}$ over or under the Bass-note (*b, c,*).

84. Fundamental—Bass-Tone. — The Bass-note (as was seen in 83) is not always the fundamental of a chord. A succession of fundamental chords gives the harmony a sense of solidity (see 76—N. B).

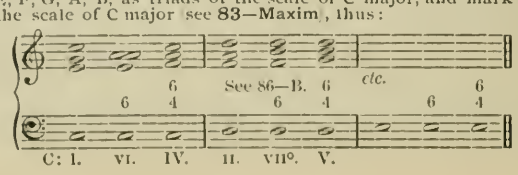
If the Bass frequently employs the *six* or the *four-six* chord this solidity of foundation will be weakened, but the movement of the Bass will be more *melodious*. Compare the following Bass with examples in Ex. XIX—55.



85. Application of Inverted Chords. — The rules regarding the connection of chords are strictly observed in the application of the inverted chords. The fundamental is generally doubled in the *six chord* and the fifth (Bass-tone) in the *four-six* chord (**Maxim, 83**). However, this is not an absolute rule.

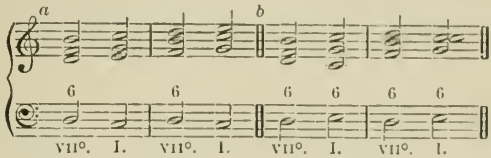
N. B.—Any tone of a triad may be doubled—the leading-tone excepted (see 56—A) —if the *melodic progression* of the voices require it, but not otherwise; thus:

In the foregoing working-out of the given Bass in 84, the fundamental is doubled in the *fundamental* and *six chords*, with the exception of the six chord at *a*, where the fifth is doubled in order not to double the third, which is in the Bass. See 91—Ex. XXXII.

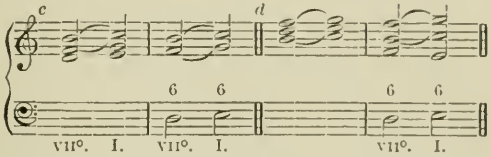
EXERCISE XXX.—Form a fundamental, a six, and a four-six chord upon each of the following tones: C, D, E, F, G, A, B, as triads of the scale of C major, and mark them as they appear upon the degrees of the scale of C major (see 83—Maxim), thus:

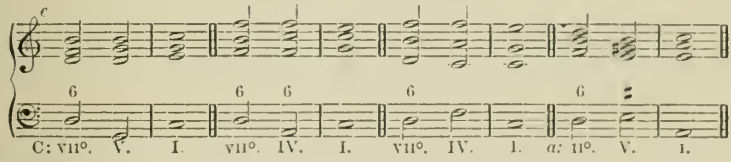


86. **Inversion of the Diminished Triad.**—The regular resolution of the diminished triad is explained in 54 and 72—B. The third may move one degree up or down.

A.—The first inversion—six chord—places the third of the diminished triad in the Bass. The third (Bass-tone) may, consequently, move one degree down to the key-note (*a*) or one degree up to the third (six chord) of the tonic triad (*b*).

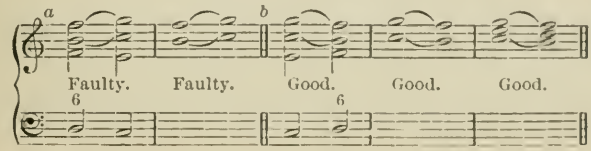
B.—The third (Bass-tone) of the diminished triad is mostly doubled—as the root is the *leading-tone*, which should not be doubled (85—N. B.) at *a*, *b*.

C.—In the IRREGULAR RESOLUTION of the dissonant interval of the diminished triad (which is the diminished fifth, 54—B,), the latter may move one degree upwards, *if it lie below the root* (as at *c*) *so as to avoid parallel fifths* (as at *d*). By placing the diminished fifth below the fundamental it becomes an augmented fourth (54—N. B.). The irregular resolution of this will be satisfactory only in the middle voices, as at *a*, *b*, *c*; and especially so in a succession of six-chords (*c*).



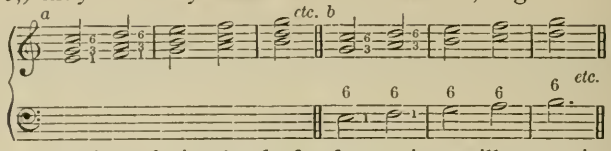
D.—The connection of the diminished triad with others than the tonic triad (with which it naturally connects, 72—B,) may result in various ways, as at *e*. Should the fundamental or fifth (the dissonant relation) come to lie in one of the outer voices (where its progression is distinctly noticeable), its treatment should then be carefully observed; the other tone of the dissonant interval in the middle voice may make an irregular progression, which would not be so noticeable here (*e*). See 75—Remark.

REMARK.—The diminished triad is used mostly in its *first inversion*—six chord.

87. **Perfect Fifth followed by a Diminished.**—The parallel fifth mentioned in 86—C, at *d*, is faulty because *the perfect fifth follows the diminished fifth.*

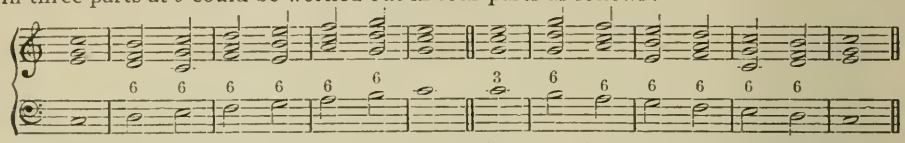
MAXIM.—The progression of two voices from a perfect fifth into a diminished fifth is allowed (*b*), whilst a diminished fifth followed by a perfect is prohibited (*a*); e. g.:



88. **Six Chords in Succession.** — A succession of six chords (**86**—B—*b*, C—*c*,) may be easily formed in three voices, e. g.:

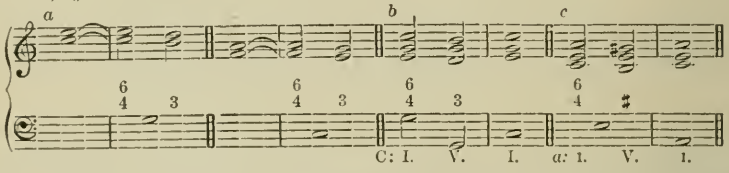


N. B.—A succession of six chords for four voices will necessitate one of the voices to move *alternately* in contrary motion with the other voices. The example in three parts at *b* could be worked out in four parts as follows:



REMARK.—The satisfactory effect of the foregoing succession of six chords is principally due to the regular progression of all voices. See Sequence (**58**).

89. **Cadence of the Four-Six Chord.**—The *four-six chord* has a very decided tendency for progression (*a*).

This inclination toward a definite progression makes the *four-six chord* especially adapted to form an *extended* AUTHENTIC CADENCE (**45**) of the major and minor scale (as at *b*, *c*,).

N. B.—The FOUR-SIX CHORD *of the tonic triad* (major and minor) followed by the simple form of the authentic close (V. I.) forms THE FOUR-SIX CADENCE (*b*, *c*,).

EXERCISE XXXI.—Write out the cadences of the four-six chord in all the major and minor scales, as at *b* and *c* above. (See **90**—Remark.)

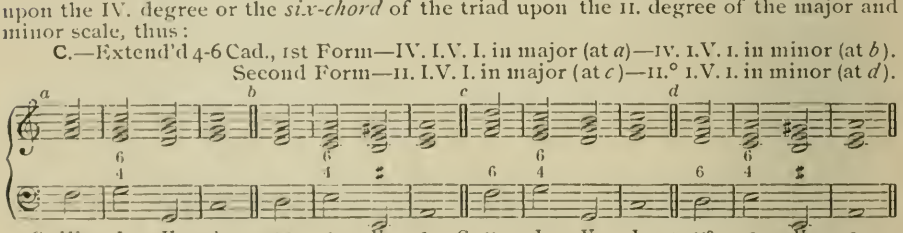
90. **Forms of the Extended Cadences.** — The simple authentic cadence consists of the chords V. I.—Dominant to Tonic (**45**). The different forms of the extended authentic cadences are:

A.— First Form—IV. V. I. in major—IV. V. I. in minor.
Second Form—II. V. I. in major—II°. V. I. in minor. (61, 75.)

B.—Four-Six Cadence—I. V. I. in major—I. V. I. in minor. (89.)

N. B.—The FOUR-SIX CADENCE is extended by preceding the latter by the triad upon the IV. degree or the *six-chord* of the triad upon the II. degree of the major and minor scale, thus:

C.—Extend'd 4-6 Cad., 1st Form—IV. I.V. I. in major (at *a*)—IV. I.V. I. in minor (at *b*).
Second Form—II. I.V. I. in major (at *c*)—II.° I.V. I. in minor (at *d*).



REMARK.—The student should become thoroughly familiar with the foregoing forms of the extended four-six cadences. He may write them out in all the scales instead of the four-six chord (Ex. XXXI). He should, as an exercise, also mark the cadences at the end of the examples of given Bass.

91. **Summary of Figured-Bass Signs.**—The meaning of the signs employed in the Figured-Bass exercises are as follows:

A.—A 3, 5, or 8 over the first Bass-note of an exercise refers to the position the upper voice is to take at the beginning of the exercise (41—Remark).

B.—A ♯, x, ♭, ♭♭, or ♮ over a Bass-note in the exercise always refers to the *third* of the Bass-note (68—Remark).

C.—A ♯, x, ♭, ♭♭, or ♮ before or after a figure over the Bass affects the figure (interval) alongside of which they are placed, as in 72, at *a* and *b*.

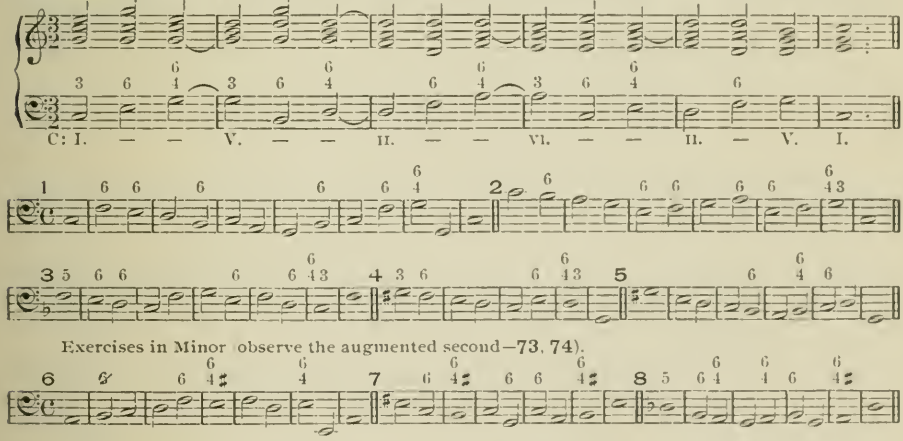
D.—A number with a stroke through it (as in Example 6, second measure of exercises below) indicates that the interval designated by the number is raised a half-step.

E.—A $\frac{6}{4}$ followed by a 3, a ♯, or a ♮ (as in 89, at *a* and *b*) indicates that the first half of the note in the Bass is a $\frac{6}{4}$, and the other half a fundamental chord (1-3-5). A 3, a ♯, or ♮ followed by a $\frac{6}{4}$ over a Bass-note indicates that the first half of the note in the Bass is a fundamental chord (1-3-5), and the second half a $\frac{6}{4}$ chord.

F.—The large Roman numerals (such as I. IV. V. VI. etc.,) refer to *major triads* upon those degrees. The small Roman numerals (such as II. III. VI. I. IV.) refer to *minor triads* upon those degrees (48—Remark). The small numerals with an ° (as VII.° II.°) refer to *diminished triads* upon those degrees; and a large numeral III with a comma (as III') indicates the *augmented triad* upon the third degree of the minor scale (69, 70,).

G.—The large letters below the Bass-notes indicate the *major scales* and the small letters the minor scales, as in 79—*a*, *b*, *c*.

EXERCISE XXXII.—Write out the exercises given below for four-part harmony. Whenever different positions of the same chord succeed each other (as in the following example), the voices may skip to the other tones of the SAME CHORD *if one or more voices remain stationary*, so as not to employ the disjunct motion (55) in all the voices at the same time. See 85.



QUESTIONS TO CHAPTER III.

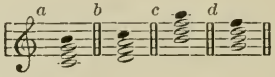
87—**80.** When is a triad inverted? 88—**81, 82.** How many inversions of a triad have we, and how are they termed? 89—**81.** What is a six chord? 90—**82.** What is a four-six chord? 91—**83.** What are derived chords? 92—**83.** Which note is doubled in the six chord? 93—**83.** Which note is doubled in the four-six chord? 94—**84.** Is the Bass-note always the fundamental? 95—**85.** What justifies an unusual doubling of a tone? 96—**86.** Which inversion of the diminished triad is mostly employed? 97—**87.** Which succession of fifths are allowed? 98—**89.** What constitutes the cadence of the four-six chord? 99—**90.** Which succession of triads constitute the two forms of the extended four-six cadence?

Chapter IV.

CHORDS OF THE SEVENTH—SEPT-CHORDS.

DOMINANT SEPT-CHORD.

92. **Sept-Chords.**—All the chords thus far treated of were triads (76), or inversions of triads (83). To the three tones of a triad may be added another tone, which would give us four different tones in a chord, instead of three, thus:



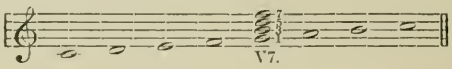
It will be seen in the foregoing examples that there has been a tone added to each triad. The added tone is always the third above the fifth of a triad, which thus becomes a seventh from the fundamental, counted upwards (25). The four tones thus construct a chord-formation of three thirds; at *a*, for example, from C to E, from E to G, and from G to B.

N. B.—A formation of intervals consisting of a *fundamental*, a *third*, a *fifth*, and a *seventh* is called a CHORD OF THE SEVENTH or SEPT-CHORD (*a*, *b*, *c*, *d*,).

REMARK.—Practical experience in teaching has convinced the author that the difficulties in the study of harmony are greatly augmented by confusion of terms. The student continually confuses the terms: *seventh chord; seventh degree; triad upon the seventh degree; chord of the seventh upon the seventh degree; seventh tone; leading-tone.* To avoid this the author has adopted the term SEPT-CHORD —German. *Sept-akkord* (abbreviated from SEPTEM—*seven*) for CHORD OF THE SEVENTH. Being appropriate, clear, and concise, its introduction will need no further excuse.

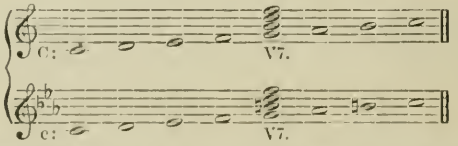
93. **Dominant Sept-Chord.**—*All sept-chords are discords* (on account of the dissonant seventh—23—N. B.). The examples in 92 demonstrate, however, that some of them sound less harsh to the ear than others.

The mildest and most agreeable sept-chord is that formed by adding a seventh to the dominant triad—V. degree of the scale; thus:



N. B.—The sept-chord formed upon the V. degree (dominant) of the scale is called DOMINANT SEPT-CHORD. It consists of a *fundamental*, a *major third*, a *perfect fifth*, and a MINOR *seventh*. It is the mildest of all sept-chords.

94. **Dominant Sept-Chord of the Major and Minor Scale.**—In 67 it was shown that the *dominant triad* of the major scale is identical with that of the minor scale. The *dominant sept-chord* of the major scale has also the same formation as that of the minor scale; viz.:

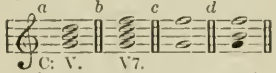


N. B.—The *dominant sept-chord* of the major and minor scale is composed of the same intervals; namely, FUNDAMENTAL, MAJOR THIRD, PERFECT FIFTH, and MINOR SEVENTH.

EXERCISE XXXIII.—Write out the dominant sept-chords of the major and minor scales, as shown in the foregoing example. The Roman numeral (V7) indicating the sept-chord upon the V. degree must be marked particularly.

95. Dissonances of the Dominant Sept-Chord.—The dominant triad (*a*) is a concord, which requires no definite resolution (51—N. B.).

By adding a seventh to the dominant triad (*b*) we receive TWO dissonant intervals, which, although being of an agreeable nature, nevertheless demand a resolution (53).



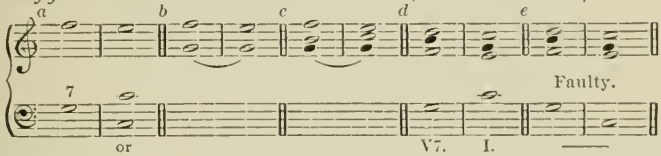
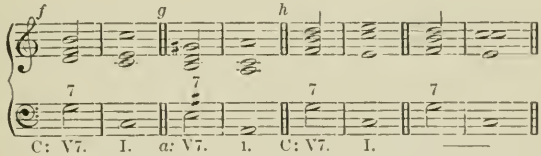
N. B.—The two dissonant intervals of the dominant sept-chord are: the *minor seventh* (*c*), and the *diminished fifth* from the third (leading-tone) to the seventh of the chord (*d*).

96. Resolution (Cadence) of the Dominant Sept-Chord.—The resolution of the two dissonant intervals of the dominant sept-chord (*minor seventh* and *diminished fifth*) are as follows:

A.—The SEVENTH descends *one diatonic degree* (*a*).

B.—The FUNDAMENTAL remains stationary *if it lie in the middle voices* (*b*), or moves a fourth up or a fifth down *if it lie in the Bass* (*a*).

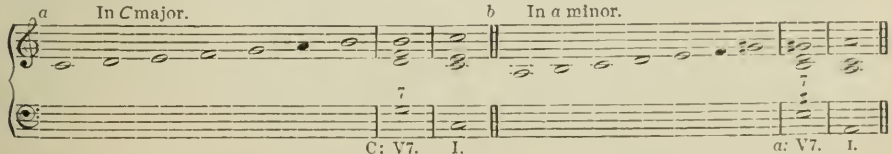
C.—The THIRD (leading-tone) moves a diatonic half-step up to the tonic, while the seventh (diminished fifth from the leading-tone—see 54—A. B.) descends one diatonic degree (*c*).

The THIRD may also make the skip of a third down; only in the middle voices, however, *if the Bass move up*, as at *d*; not down, as at *e*, which is faulty on account of the *covered fifth* between the Alto and the Bass (see 56—Maxim).

D.—The FIFTH (being a consonant interval—22) may move a diatonic degree up or down (*h*).

N. B.—The resolution of the dominant sept-chord naturally results into the tonic triad of the major (*f*) and minor scale (*g*). This resolution of the chord forms the *most effective* AUTHENTIC CADENCE, if the tonic triad fall upon the principal accent (down beat) of a measure, as at *f* and *g*.

Rule VI.—The seventh in the dominant sept-chord must descend *one diatonic degree.*

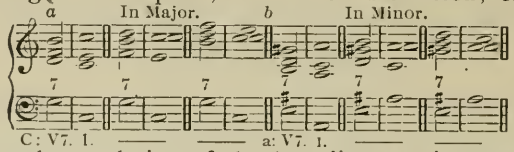
97. Principal Sept-Chord.—In 32 it was stated that the primary triads—*tonic, sub-dominant, dominant*—definitely characterized the major and minor scale (66—N. B.).

Three triads were thus required to express the tonality (that is, the establishing) of the key, which is, however, much more decidedly expressed by the *dominant sept-chord* followed by the tonic triad (*a, b,*), as in these two chords are contained all the tones of the scale, excepting the sixth; e. g.:

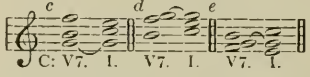


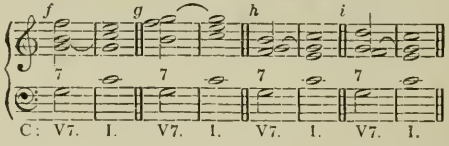
N. B.—The dominant sept-chord is, in consequence of its close relation to the tonic triad, the most important (essential) sept-chord of the major and minor scale.

98. **Omission of a Tone of the Dominant Sept-Chord.**—In the regular resolution of the dominant sept-chord (*a*, *b*,) it will be seen that the tonic triad following is incomplete, as the fifth is omitted; e. g.:



N. B.—The regular resolution of the *two dissonant intervals* of the dominant sept-chord (96—A, B, C,) results into the complete tonic triad *if the fundamental remains stationary* (96—B), thereby becoming fifth of the tonic triad following; thus:

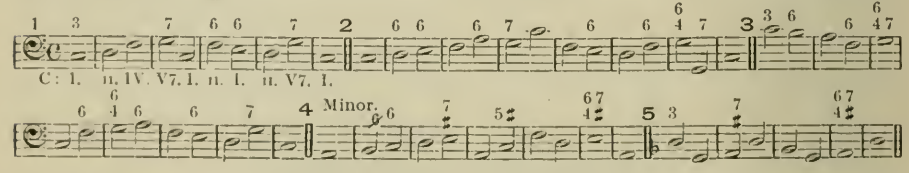


By adding the Bass—which takes the fundamental of each chord—to the foregoing three upper voices, we receive the regular four parts, at *f*, *g*, *h*. In these examples the sept-chord is incomplete, as the fifth is omitted; in its stead, however, the fundamental is doubled, and by retaining it in an upper voice becomes fifth of the following tonic triad, which is not the case in the examples at *a*, *b*, where the sept-chord is *complete*, but the following triad *incomplete*.

MAXIM.—In the dominant sept-chord the *fifth* may be omitted and the fundamental doubled instead (*f*, *g*, *h*). The *third* may likewise be omitted, but in very rare cases (*i*), as it is the leading-tone (56) which naturally leads up to the key-note.

99. **The Dominant Sept-Chord in the Authentic Cadence.**—The authentic cadence (V. I.—45) is made much more definite and decided by employing the dominant sept-chord instead of the dominant triad.

N. B.—The decided feeling of close (cadence) which is brought about by the resolution of the dominant sept-chord into the tonic triad (98—*h*) makes its application very desirable at the end of a composition (96—N. B.), but less so in the middle, where the feeling of close (ending) ought to be avoided. In this case the *dominant triad* would be better adapted, as it does not express this feeling of close as decidedly as the dominant sept-chord. Compare 45 *a*, *b*, *c*, with 98 *f*, *g*, *h*.

EXERCISE XXXIV.—Form authentic cadences with the dominant sept-chord in all the major and minor scales, and work out the Bass given below. The degrees must be carefully marked. The first half of the E in the sixth measure of example 4 is a $\frac{6}{4}$ chord, the second half a dominant sept-chord, with the third raised (♯).



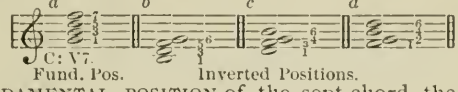
QUESTIONS TO CHAPTER IV.

100—**92.** What is a sept-chord? 101—**93.** What is the sept-chord upon the V. degree called? 102—**94.** What intervals does the dominant sept-chord of the major and minor scale consist of? 103—**95.** Which are the dissonant intervals in the dominant sept-chord? 104—**96.** How does the seventh in the dominant sept-chord resolve? 105—**96.** Which triad does the dominant sept-chord naturally resolve into? 106—**97.** Which two chords definitely establish the tonality of a key? 107—**98.** Which tone of the dominant sept-chord may be omitted?

Chapter V.

INVERSIONS OF THE SEPT-CHORD.

100. **Inversions of the Dominant Sept-Chord.**—A triad has three positions: the fundamental position, and the two inversions (80—N. B.). The sept-chord has four positions; namely: the fundamental position (*a*), the *first* (*b*), *second* (*c*), and *third* (*d*) inversions.



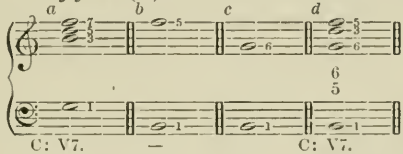
A.—In the FUNDAMENTAL POSITION of the sept-chord the regular order of the intervals is 1-3-5-7 (*a*).

B.—In the FIRST INVERSION the order of the intervals is 1-3-5-6 (*b*).

C.—In the SECOND INVERSION the order of the intervals is 1-3-4-6 (*c*).

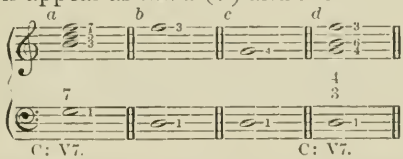
D.—In the THIRD INVERSION the order of the intervals is 1-2-4-6 (*d*).

101. **Five-Six Chord—First Inversion.**—In the first inversion of the dominant sept-chord (100—B) the third of the chord (leading-tone) lies in the Bass. Counting from this upward, the seventh of the original chord (*a*) will appear as *fifth* (*b*), and the fundamental as *sixth* (*c*).



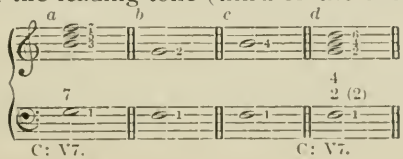
N. B.—In the *first inversion* of the sept-chord the two essential tones of the chord (fundamental and seventh) appear as *fifth* (*b*) *and sixth* (*c*); the first inversion is consequently called the FIVE-SIX CHORD (*d*). In the figured Bass it is indicated by a 5-6 over the Bass-note, as at *d*.

102. **Three-Four Chord—Second Inversion.**—In the second inversion of the dominant sept-chord (100—C) the fifth of the original chord lies in the Bass. Counting from this to the other intervals upward, the seventh of the original chord will appear as *third* (*b*) and the fundamental as *fourth* (*c*).

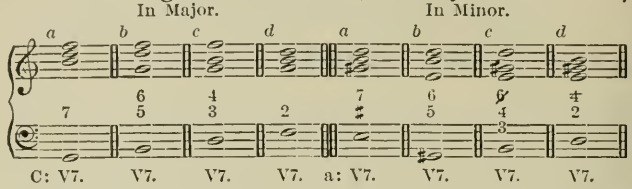


N. B.—In the *second inversion* of the sept-chord the two essential tones of the chord (fundamental and seventh) will appear as *third* (*b*) and *fourth* (*c*); this inversion is consequently called THREE-FOUR CHORD. In the figured Bass it is indicated by a 3-4 over the Bass-note, as at *d*.

103. **Two-Four Chord—Third Inversion.**—The third inversion of the sept-chord (100—D) has the seventh of the original chord in the Bass. Counting from this upward, the fundamental of the original chord appears as *second* (*b*), the leading-tone (third of the chord) as *fourth* (*c*).

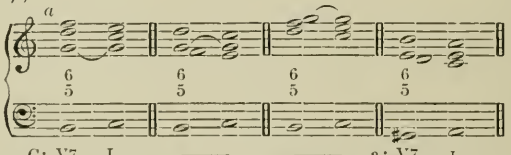


N. B.—The *third inversion* of the sept-chord is consequently called TWO-FOUR CHORD or CHORD OF THE SECOND. It is indicated over the Bass by a 2-4 or a 2 (*d*).

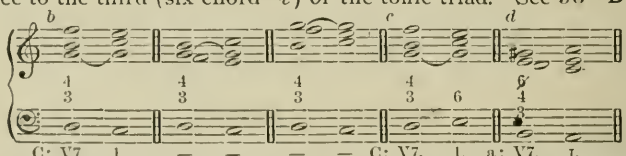
104. **Derived Sept-Chords.**—The *five-six chord* (**101**), the *three-four chord* (**102**), and the *two-four chord* (**103**), are not fundamental chords (**76**), but inversions of a fundamental chord. The inverted chords have the same four tones contained in the fundamental chord (*a*). By placing the different tones of the chord in the Bass, however, (*a, b, c, d,*), the chord changes its fundamental character, but not its actual formation and *location upon the degree of the scale.* The inverted chords are consequently all formed upon the same degree of the scale; namely, the fifth—V7.

N. B.—The *five-six chord* (*b*), *three-four chord* (*c*), and *two-four chord* (*d*), are chords derived through the inversions of a fundamental sept-chord (*b, c, d*). They are consequently called DERIVED SEPT-CHORDS.

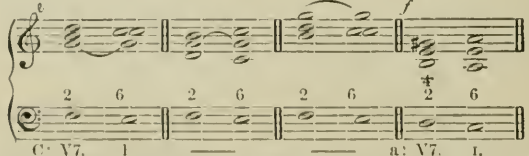
105. **Resolution of the Inverted Sept-Chords.**—In the resolution of the inverted sept-chords (**101, 102, 103,**) the principal point to be observed is the *resolution of the dissonant intervals* (**96**). These are: *the* DIMINISHED FIFTH (from the third of the chord) and *the* MINOR SEVENTH.

A.—In the FIVE-SIX CHORD (*first inversion*) the third of the chord, the leading-tone, is in the Bass. This moves up to the tonic, while the diminished fifth (seventh) moves down one diatonic degree. The fundamental remains stationary, as it is in an upper voice (**96—B**); thus:



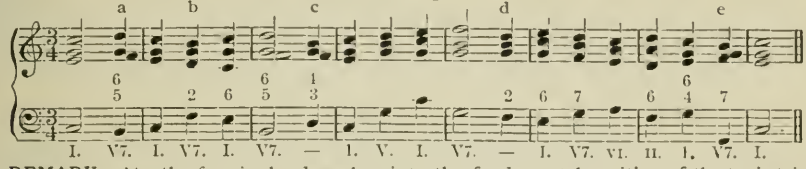
B.—In the THREE-FOUR CHORD (*second inversion*) the fifth of the chord is in the Bass. This generally descends one diatonic degree to the tonic (*b, d,*), or ascends one diatonic degree to the third (six chord—*c*) of the tonic triad. See **96—D.**



C.—In the TWO-FOUR CHORD, or CHORD OF THE SECOND (*third inversion*) the seventh of the chord is in the Bass. This always descends one diatonic degree (**Rule VI—96**); thus resolving into the six chord of the tonic triad; e. g.:

EXERCISE XXXVI.—Form the dominant sept-chord of the *keys* of D major, d minor; G, g; F, f; Eb, eb A, a, and resolve it from the *fundamental position; five-six chord* (**105—A**); *three-four chord* (**105—B**); and *two-four chord* (**105—C** to the tonic triad of the major and minor scale.

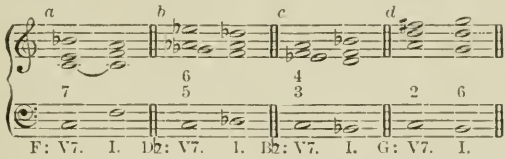
106. Application of the Inverted Sept-Chords. — The regular resolution of the dominant sept-chord in its fundamental position definitely establishes the close. (See 96—N. B.) Consequently it is very available at the end of a composition or melody, but less so in the middle of a strain, where the feeling of close (cadence) should be avoided. See 99—N. B.

N. B.—The *inverted positions* of the dominant sept-chord (105) may be employed in the middle of a strain, as their resolution into the tonic triad does not give that feeling of complete ending (cadence); e. g.:

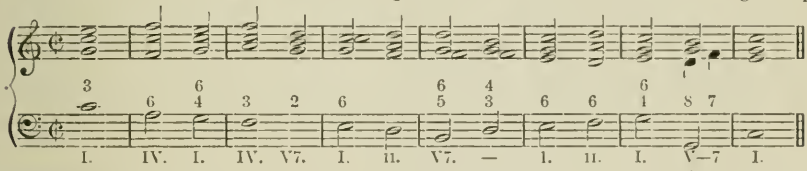


REMARK.—At *a* the *five-six* chord resolves into the fundamental position of the tonic triad; at *b* and *d* the *two-four* chord resolves into the six chord of the tonic triad; at *c* the *three-four* chord resolves into the fundamental position of the tonic triad. At the end *e*, the fundamental position of the dominant sept-chord resolves into the tonic triad, which definitely establishes the close (cadence).

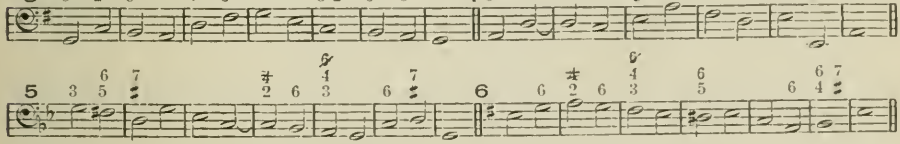
EXERCISE XXXVII.—Form *four* dominant sept-chords with the SAME TONE (C) as *fundamental* (*a*), as *major third* (five-six chord, at *b*), as *perfect fifth* (three-four chord, at *c*), and as *minor seventh* (two-four chord, at *d*), and resolve these sept-chords to the tonic triad (regular resolution—105) of the keys in which they are found, as below (see 94—N. B.). Form similar examples upon these tones: D, F, A, E, and B.



EXERCISE XXXVIII.—Work out the Bass given below as is shown in the following example:



REMARK.—The figures 3 and 2 over the Bass-note in the third measure indicate that the first half of the note demands the third (3), that is: the 1-3-5—fundamental chord; the second half of the note forms the $\frac{4}{2}$ chord, or third inversion. The 8 and 7 over the G in the second last measure demands the octave (8) in the first half of the chord and the seventh (7) in the last half, as indicated in the Tenor. The figures with a stroke are raised a chromatic half-step as in 105, at *d*, *f*, (see 91—D).



QUESTIONS TO CHAPTER V.

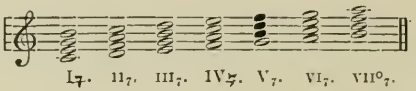
108—100. How many positions has a sept-chord? and how many inversions? 109—100. What intervals have we in the first, second, and third inversion of a sept-chord? 110—101, 102, 103. How is the first, second, and third inversion of a sept-chord called? 111—105. What must be especially observed in the resolution of a dominant sept-chord? 112—106. Which resolution of the four positions of the dominant sept-chord establishes a definite cadence?

Chapter VI.

COLLATERAL SEPT-CHORDS.

A.—COLLATERAL SEPT-CHORDS OF THE MAJOR SCALE.

107. The Sept-Chords of the Major Scale.—The essential sept-chord of the major and minor scale is formed upon the *dominant triad* (**97**), fifth degree (V7.) of the scale. Upon the other degrees of the scale we likewise form sept-chords by adding a *third* to the triads; thus:



A.—The MAJOR TRIADS upon the first degree (I.)—*tonic triad*—and fourth degree (IV.)—*sub-dominant triad*—have a MAJOR SEVENTH (which is indicated by a stroke through the seven—I7., IV7.).

B.—The MINOR TRIADS upon the second degree (II.), third degree (III.), and sixth degree (VI.), have a MINOR SEVENTH (being indicated by a plain seven—II7., III7., IV7.).

C.—The DIMINISHED TRIAD upon the seventh degree (VII°.)—*leading-tone*—has a MINOR SEVENTH.

N. B.—These chords are called COLLATERAL SEPT-CHORDS; the dominant sept-chord being the *principal* or *essential sept-chord* (**97**).

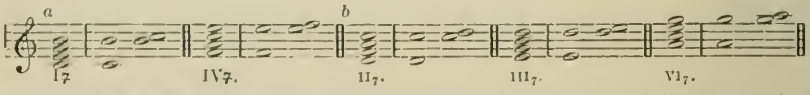
EXERCISE XXXIX.—Write out the sept-chords of the major scale in all the major scales and mark the degrees, as above.

108. Dissonant Intervals of the Sept-Chords.—The triads upon the I., II., III., IV., V., and VI. degrees of the major scale are concords (**51**); the triad upon the VII°. is a discord (**52**). The harshness of the sept-chords formed upon concords (**107**—A, B,) can consequently not be attributed to the three tones forming the triads—*fundamental*, *third*, *fifth*—(major and minor triads), but to the added seventh.

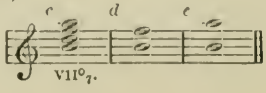
N. B.—The FUNDAMENTAL and SEVENTH constitute the dissonant interval in all sept-chords.

A.—The MAJOR TRIADS with major sevenths (upon the I7. and IV7. degree), are the most dissonant (harsh) of all the sept-chords, as the major seventh (if inverted) is but a minor second from the fundamental (*a*).

B.—The MINOR TRIADS with minor sevenths (upon the II7., III7., and IV7. degree) are less harsh, as the seventh (if inverted) forms a major second with the fundamental (*b*).



C.—The DIMINISHED TRIAD with minor seventh (upon the VII°. degree), is, with the exception of the dominant sept-chord (V7. degree), the mildest discord (*c*). It contains (like the dominant sept-chord—**95**) two dissonant intervals; viz.: *diminished fifth* (*d*) and *minor seventh* (*e*).

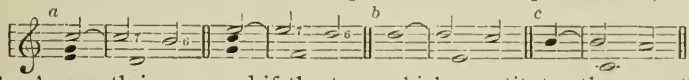


109. **Preparation of the Seventh.** — The extremely dissonant (harsh) character of the seventh in the collateral sept-chords (108—N. B.) demands the fulfillment of certain conditions in the application of these chords. These are as follows:

A.—The seventh in the *collateral sept-chords* MUST BE PREPARED (see N. B.).

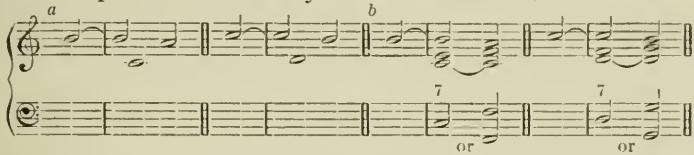
B.—The *preparation* of a seventh (the tone which is to constitute the seventh) must be as long as the following seventh (*a*); it may be longer (*b*) but not shorter (*c*), as, in the latter instance, the preparation would not be sufficiently noticed.

C.—The preparation generally occurs upon the unaccented part of the measure (*arsis*), while the dissonant seventh falls upon the accented part (*thesis*).



N. B.—A seventh is prepared if the tone which constitutes the seventh (as at *a*) is a prolonged (or sustained) tone which forms one of the intervals of the preceding chord, so that it is tied, or held over by the same voice into the following chord.

110. **Resolution of the Seventh.**—The seventh in the collateral sept-chords *must always* DESCEND *one diatonic degree* (*a*, *b*,). The fundamental remains stationary *if it lies in the middle* (or *upper*) *voices* (*a*, *b*,), and moves a fourth up or a fifth down *if it lies in the Bass*, as at *b*.

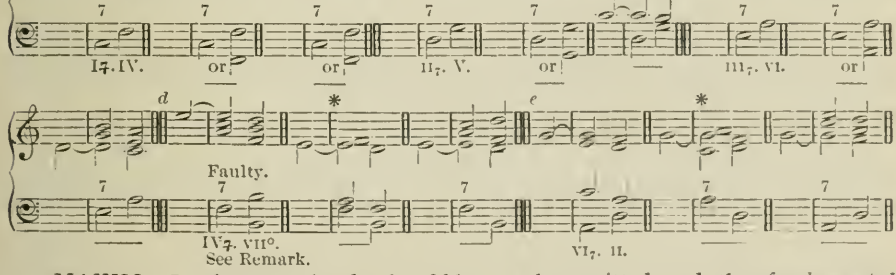


REMARK.—In the first example at *a* and *b* the seventh of the chord is at the same time the seventh (leading-tone) of the scale. As seventh of a sept-chord *it must descend* one degree (56—B).

111. **Resolution of Sept-Chords — Cadence Progression.** — *The sept-chords formed upon* CONCORDS (major and minor triads—108) *naturally* RESOLVE INTO THE TRIAD A FOURTH DEGREE ABOVE OR A FIFTH BELOW.

N. B.—The regular resolution of a sept-chord into the triad (concord) a *fourth* degree above or a *fifth* below forms the CADENCE PROGRESSION (see 96—N. B.).

The sept-chord upon the I7. resolves into the triad (concord) upon the IV. (*a*); the chord upon the II$_7$. into the triad (concord) upon the V. (*b*); the chord upon the III$_7$. into the triad (concord) upon the VI. (*c*); the chord upon the IV7. into *the diminished triad* upon the VII°.—which, being a discord, is an unsatisfactory connection (*d*); the chord upon the VI$_7$. into the triad (concord) upon the II. (*e*). The resolution of the diminished triad with minor seventh is explained in 112.

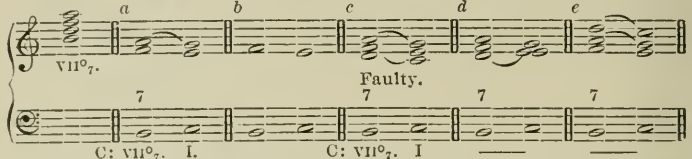


MAXIM.—In the sept-chords the fifth may be omitted and the *fundamental doubled* (as at *), thereby enabling us to retain the latter as common-tone, which becomes fifth of the following triad (98—Maxim).

REMARK.—The step of an augmented fourth (tritone) at *d* is faulty: the step of a diminished fifth is preferable. See Maxim—59.

112. Resolution of the Dim. Triad with Minor Seventh.—In the sept-chord upon the seventh degree (leading-tone) are contained TWO dissonant intervals: a minor seventh and a diminished fifth (108—C); both of these require a definite resolution.

A.—The *fundamental* (leading-tone) moves a diatonic degree up to the tonic (*a*).
B.—The *diminished fifth* descends one diatonic degree (*b*); see 54—B.
C.—The *minor seventh* moves (like all sevenths) one diatonic degree down (*a*, *e*,).

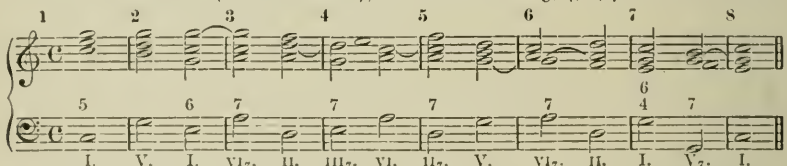


D.—The *third*, being a consonant interval, may move a degree up or down (54—C). If the third lies below the seventh, however, as at *c*, it can not then move down, on account of the *parallel fifth* between the descending seventh and the descending third. The third would, consequently, be obliged to ascend, thus doubling the third of the tonic triad, as at *d*. If the third lies above the seventh, as at *e*, it may then descend, as it forms a fourth with the descending seventh in this case.

REMARK.—The sept-chord upon the seventh degree *naturally resolves* (like the diminished triad upon the seventh degree—54) *into the tonic triad* (*d*, *e*,). IN THESE TWO CHORDS ARE CONTAINED ALL THE TONES OF THE MAJOR SCALE. The tonality of the key is consequently definitely established through the connection of those two chords (see 97). This chord is, after the dominant-sept-chord (97), the mildest discord of the major scale (see 108—C).

113. Application of Sept-Chords. — In the application of the sept-chords the point most to be considered is the treatment of *the fundamental and seventh* (108—N. B.).

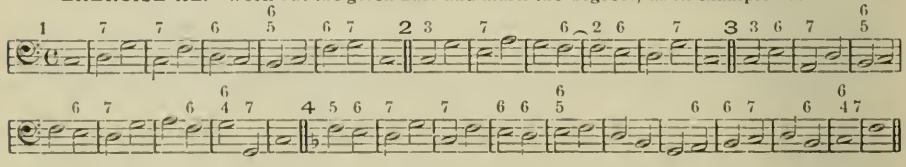
A.—In the collateral sept-chords the SEVENTH *must always be prepared* (109—A), as in the measures 2, 3, 4, 5 of example.
B.—The SEVENTH in all sept-chords *must descend one diatonic degree* (110), as in the measures 3, 4, 5, 6, 7.
C. The FUNDAMENTAL remains stationary in the middle or upper voices (as in measures 3, 4, 6, 7, and moves a fourth up or a fifth down in the Bass (110), as in measures 3, 4, 6, 7.
D.—The FIFTH ascends or descends (measure 5), or may be omitted, and the fundamental doubled instead (111—Maxim), as in measures 3, 4, 6, 7.



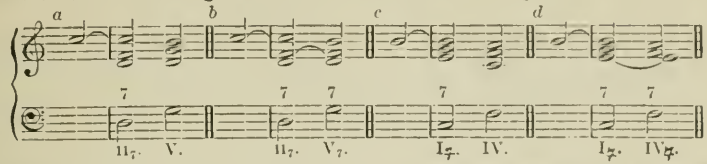
Rule VII.—The seventh in the *collateral sept-chords* must be prepared (109), and resolve (110) one diatonic degree downward, The seventh in the *dominant sept-chord* does not require a preparation (measure 7). See 118—A.

REMARK.—The resolution of the sept-chords in the foregoing example results into the triad a fourth degree above or a fifth below, which is the CADENCE PROGRESSION (111—N. B.). This is the most satisfactory connection *if the sept-chord be formed on a* CONCORD *and the following triad* (upon the fourth degree above or fifth below) *be a* CONCORD *likewise*. See examples in 111.

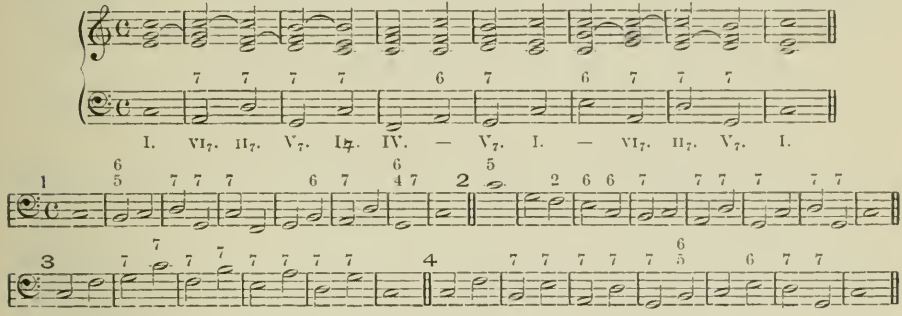
EXERCISE XL.—Work out the given Bass and mark the degrees, as in example above.



114. **Succession of Sept-Chords.**—A sept-chord naturally resolves into the triad a fourth degree above or a fifth below (**111**).

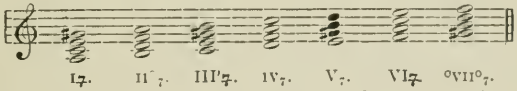
N. B.—The resolution of a sept-chord naturally results into the triad (*a*, *c*,) or *sept-chord* (*b*, *d*,) a fourth degree above or a fifth below; e. g.:

MAXIM.—In a succession of SEPT-CHORDS *in their natural resolution* in four-part harmony (as at *b*, *d*,) THE FIFTH WILL BE FOUND WANTING IN EACH ALTERNATE CHORD. At *b* the fifth is wanting in the first sept-chord, but contained in the second; at *d* the fifth is contained in the first but is lacking in the second chord (**113—D**).

EXERCISE XLI.—The following example illustrates the working out of the given Bass below.



B.—COLLATERAL SEPT-CHORDS OF THE MINOR SCALE.

115. **The Sept-Chords of the Minor Scale.**—The principal sept-chord of the minor scale is the *dominant sept-chord* (**97**). The collateral sept-chords of the minor scale are formed (like those of the major scale—**107**) upon the triads of the I., II°., III'., IV., VI., and VII°. degrees; e. g.:



A.—The MINOR TRIAD (concord) upon the I. degree—tonic triad—has a *major seventh*, which is the leading-tone of the scale: I7.

B.—The DIMINISHED TRIAD (discord) upon the II°. degree has a *minor seventh* (which makes this chord identical with the sept-chord upon the VII°7. degree of the major scale—**107—C**): II°7.

C.—The AUG. TRIAD (discord) upon the III'. degree has a *major seventh:* III'7.

D—The MINOR TRIAD (concord) upon the IV. degree has a *minor seventh:* IV7.

E.—The MAJOR TRIAD (concord) upon the VI. degree has a *major seventh:* VI7.

F.—The DIMINISHED TRIAD (discord) upon the VII°. degree (leading-tone) receives a *diminished seventh;* it is consequently termed DIMINISHED SEPT-CHORD. It is indicated upon the degree by an additional ° for the diminished seventh; thus: °VII°7.

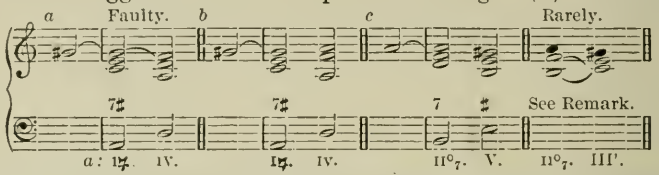
REMARK.—In the major scale there are but *three* different formations of the collateral sept-chords **107—A, B, C,**, while in the minor scale there are *six* different formations of the collateral sept-chords.

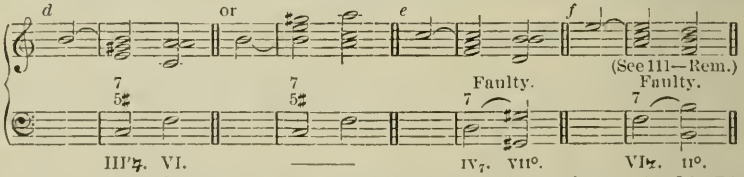
EXERCISE XLII.—Write the sept-chords of the minor scale, as above, in all the minor scales. Mark the degrees as in example.

116. **Resolution of the Collateral Sept-Chords.**—The dissonant intervals of the sept-chords of the minor scale receive the same treatment as was found necessary in the application of the sept-chords of the major scale (113); namely, *the seventh must be* PREPARED (109) and *must* RESOLVE *one diatonic degree downward* (110); **Rule VII., 113.**

N. B.—The collateral sept-chords of the minor scale resolve (like those of the major, 111) into the triad *a fourth degree above or a fifth below*—CADENCE PROGRESSION. (See 111—N. B. and 113—Remark.)

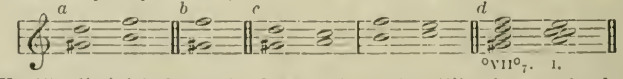
A.—The seventh of the chord upon the I. degree (tonic triad, 115—A) is the leading-tone. The latter can, consequently, *not move down one diatonic degree in the minor scale* (as it does in the major, 110—Remark), as the step downward is an AUGMENTED SECOND (Rule V., 73), which progression is faulty (*a*). The seventh is (in this exceptional case) obliged to move a diatonic half-step up to the tonic (keynote); thus resolving into the *fifth* of the triad a fourth degree above (N. B.), as at *b*. See Remark.

B.—The sept-chord upon the II°. degree (115—B) resolves like the diminished triad upon the II°. (75—B) into the dominant chord, a fourth degree above, not as its dissonant intervals suggest—to the triad upon the III'. degree (*c*). See Remark.

C.—The sept-chord upon the III'. degree (115—C) resolves to the triad a fourth degree above (*d*), as does the triad (72—A). See Remark.

D.—The sept-chord upon the IV. and VI. degree (115—D and E) resolve into the diminished triads (discords) a fourth degree above, as at *e* and *f*. This resolution is not often employed, as the connection is very harsh and unsatisfactory. (See 113—Remark.) The resolution of the chord upon the VII°. degree is explained 117.

REMARK.—The artificially raised seventh (leading-tone) of the minor scale (64—B) is rarely employed as the major seventh of the chord upon the I. degree (as mentioned at A), or as augmented fifth of the chord upon the III'. degree (C). A different application will be pointed out later (140). The dissonant intervals of the sept-chord upon the II°. degree suggest a resolution into the augmented triad (*c*), but this resolution is very harsh and impracticable. (See 75—Remark.)

117. **Resolution of the Diminished Sept-Chord.**—The sept-chord upon the VII°. degree of the minor scale (115—F) contains three dissonant intervals; namely, TWO *diminished fifths* (*a*) and ONE *diminished seventh* (*b*).

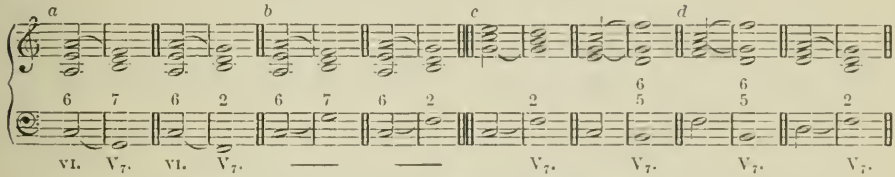
N. B.—The two diminished fifths require definite resolution (72—B), as at *c*, which naturally resolves the *diminished sept-chord* into the TONIC TRIAD instead of the triad a fourth degree above (see 111—N. B.); the fundamental (leading-tone) ascends *one diatonic half-step* (9—A) and the seventh descends one degree (*d*).

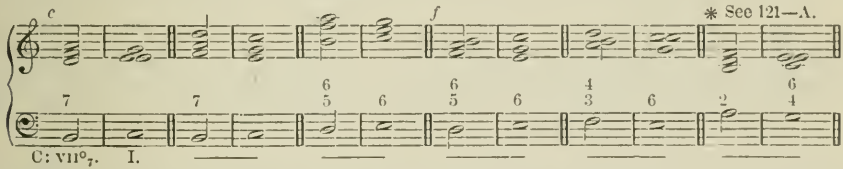


REMARK.—The diminished sept-chord naturally resolves (like the sept-chord upon the VII°. degree of the major scale, 112—Remark) into the *tonic triad*. IN THESE TWO CHORDS ARE CONTAINED ALL THE TONES OF THE MINOR SCALE; the connection of these two chords thus definitely establishes the tonality of the minor key (see 97). In the resolution of the diminished sept-chord into the tonic triad particular care must be taken to avoid *parallel fifths* (see N. B.—121.)

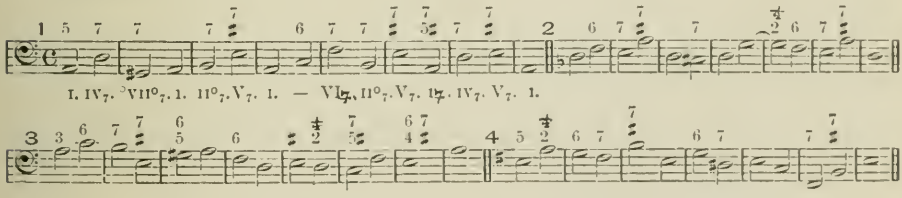
EXERCISE XLIII.—Resolve the diminished sept-chord of each minor scale into the tonic triad (as at *d*)

118. Sevenths not Requiring Preparation. — ALL SEPT-CHORDS ARE DISCORDS. Among the sept-chords of the major (107) and minor scale (115) are some, however, that have a degree of mildness which will permit of their application without a preparation of the dissonant seventh (109).

A.—In the DOMINANT SEPT-CHORD *the seventh does not require preparation* (113—Rule VII.). The *free entrance* of the fundamental and seventh (dissonant interval, 108—N. B.) is not in all instances mild. Their *free entrance* sounds very harsh and unsatisfactory if we move into the fundamental and seventh in the same direction, as at *a;* it is best, therefore, (if the seventh enters unprepared,) to have the fundamental retained (held over) from the preceding chord (*c*), or move into the fundamental and seventh in contrary motion (*b*, *d*,).

B.—The DIMINISHED SEPT-CHORD (115—F; 117) is the mildest of all discords; it does not require a preparation of the seventh, or any other dissonant interval.

C.—In the sept-chord upon the seventh degree of the major scale (108—C; 112) the *dissonant seventh* does not require preparation *if it lies above the fundamental* (*e*); if it lies *below* the fundamental (*f*) its free entrance will then be somewhat harsh. These latter positions are consequently not as frequently employed. See 115—B.

N. B.—The foregoing three chords (A, B, C,) have an inherent dissonant character, which (if they are *naturally* resolved) definitely establishes the key in which they occur (see 97 and Remarks in 112, 117).

EXERCISE XLIV.—Work out the given Bass and mark the degrees as in Exercise 1.



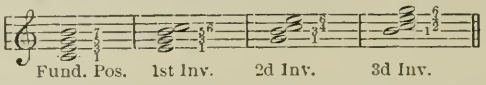
QUESTIONS TO CHAPTER VI.

113—**107.** Upon which degree of the major scale is the essential sept-chord formed? And upon which degrees the collateral sept-chords? 114—**107.** What kind of a triad is found upon the seventh degree (leading-tone) of the major scale? What kind of a seventh is added to this? 115—**108.** Which is the dissonant interval in all sept-chords? 116—**109, 110.** What is required of the seventh in all sept-chords? 117—**110.** How does the seventh in the sept-chord resolve? 118—**111.** Into which triad does a sept-chord regularly resolve? What is this progression called? 119—**111.** Which tone may be omitted in a sept-chord? 120—**112.** Into which triad does the sept-chord upon the leading-tone of the major scale naturally resolve? 121—**115.** How is the sept-chord upon the leading-tone of the minor scale called? 122—**117.** Which are the dissonant intervals in the diminished sept-chord? Into what triad do they naturally resolve? 123—**118.** Which sept-chords do not require a preparation of the seventh? 124—**113.** What is the rule regarding the treatment of the seventh of a sept-chord?

Chapter VII.

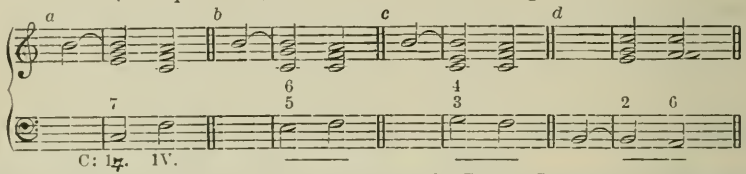
INVERSION OF THE COLLATERAL SEPT-CHORDS.

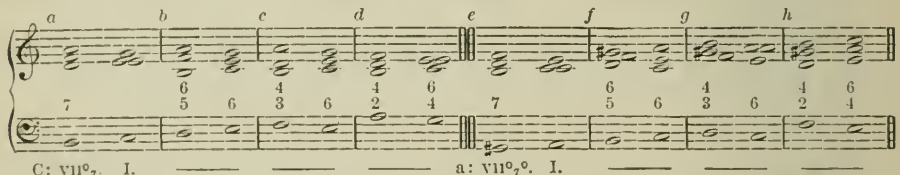
119. **Inversion of the Sept-Chords.**—The inversion of the *collateral sept-chords* gives us the same figures (intervals) as is obtained by the inversion of the *dominant sept-chord* (100); namely, *first inversion:* five-six chord; *second inversion:* three-four chord; *third inversion*: two-four chord.



120. **Resolution of the Inverted Collateral Sept-Chords.**—All sept-chords resolve regularly *into the triad a fourth degree above or a fifth below*, (111)—excepting the sept-chords upon the VII°. degree of the major (112) and minor scale (117).

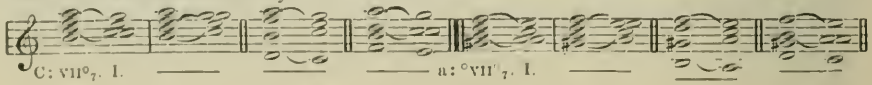
N. B.—The inverted collateral sept-chords resolve like the fundamental chord (*a*) into the triad (or sept-chord, 114—N. B.) a fourth degree above or a fifth below.



121. **Resolution of the Inverted Sept-Chords upon the VII°. Degree.**—The sept-chords upon the VII°. degree of the major scale (112) and minor scale (117) do not resolve into the triad a fourth degree above or a fifth below, but to the triad *one degree above*—to the TONIC TRIAD. The inversions of these chords likewise resolve to the TONIC TRIAD; thus:

A.—The resolution of the inversions of the sept-chord upon the VII°. degree of the major scale at *b*, *c*, are satisfactory whenever the seventh lies above the root (see 118—C.) In the two-four chord (at *d*), however, the seventh lies in the Bass, consequently below the fundamental, which gives it a certain harshness; besides, it resolves into the four-six chord, which likewise has a tendency for resolution (89). The resolution of the two-four into four-six chord should therefore be employed, with a careful observance of these peculiarities.

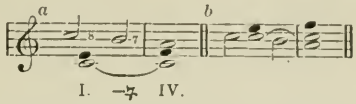
B.—The *diminished sept-chord* (117), as also its inversion (*f*, *g*, *h*,) resolve into the *tonic triad*. The two-four chord resolves into the four-six chord of the tonic triad (at *h*);—what was said at A regarding the resolution into the four-six chord equally applies here.

N. B.—The very mild character of the diminished sept-chord makes its *introduction*, as also its *resolution*, extremely pliant. The main point to guard against in the resolution of the above chords (*a*, *h*,) is the *parallel fifths*. The following progressions are therefore faulty:

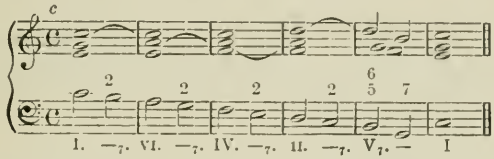


122. **Passing Seventh.**—All sevenths in the sept-chords (with the exception of those mentioned in 118) require a preparation. There is an instance, however, in which the sevenths in the collateral sept-chords do not require a preparation. The conditions are as follows:

A.—The seventh in the collateral sept-chords may be introduced without a preparation if a voice *moves down diatonically* from the root (*b*) or octave of the fundamental (*a*), PASSING *through the seventh* to the tone *a diatonic degree below.*



B.—The fundamental of the chord must remain stationary in order to avoid the harshness caused by the *passing seventh* in some other voice (*a. b, c.*)

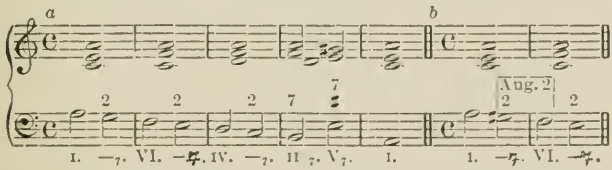


MAXIM.—In the collateral sept-chords the seventh may enter unprepared *if it is employed as* PASSING SEVENTH.

N. B.—The first tone taken by the Bass in the first four measures (at *c*) is the fundamental of the chord, and the second tone (upon the unaccented part of the measure) is the *passing seventh* of the chord, which, as the other tones of the chord are sustained, has the character of a *passing tone* descending (161). The seventh thus receives more the character of *melody* than *harmony.* See Remark—123.

123. **The Leading-Tone in the Harmonic Minor Scale.**—The leading-tone in the harmonic minor scale is chromatically raised ascending and descending (64—B). This gives us an augmented second between the sixth and seventh ascending and seventh and sixth descending, which is an unmelodious progression.

The *leading-tone* can not be employed as a *passing seventh* (122—A) upon the tonic triad of the minor scale (as at *b*), as it would have to descend to the sixth of the scale, which forms the step of an *augmented second* (73). If the seventh of the minor scale is to be used as a *passing seventh* (as in the major scale, 122, at *a, b, c,*), it will be necessary to employ the *melodic minor scale* (64—C) as at *a*, in which the seventh of the scale is lowered descending. See 161—B.

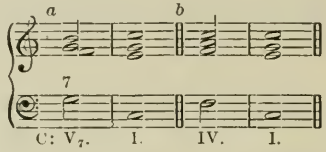


N. B.—The descending *melodic minor scale* does not contain the chromatically raised seventh (leading-tone). In descending this scale (as at *a*), the seventh of the scale is consequently not the proper seventh of the tonic triad, at *b* see 116—A. As the seventh of the scale is in this case employed as a *passing seventh* (which has the character of *melody*, 122—N. B.) we may therefore use the seventh of the melodic scale descending in connection with the tonic triad (as at *a*), avoiding thereby the step of an augmented second and making the progression of the Bass more melodious.

124. The Perfect Cadence.—The conditions necessary to a perfect cadence of the major or minor scale are:

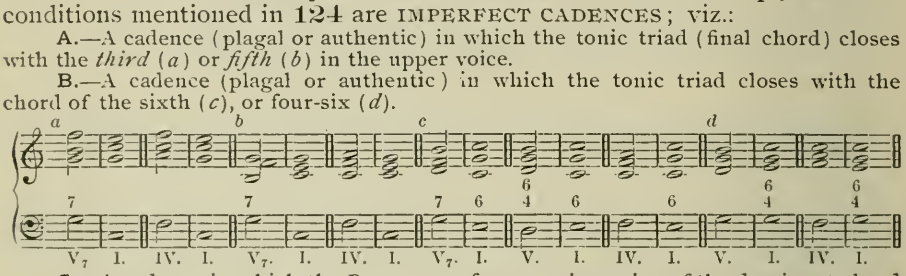
A.—The Bass moves from the fundamental of the *dominant* chord to the fundamental of the *tonic triad*—AUTHENTIC CADENCE (45), at *a*; in the PLAGAL CADENCE (46) from the fundamental of the *sub-dominant* chord to the fundamental of the *tonic triad*, at *b*.

B.—In the final chord (tonic triad) the upper voice must close with the key-note (*a*. *b*,).

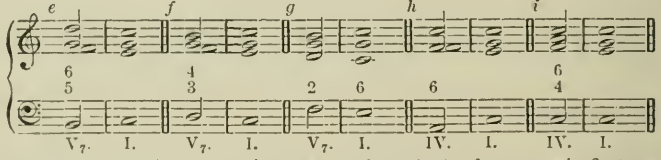
C.—The tonic triad must fall upon the accented part (down beat) of the measure (see 96—N. B.).

125. The Imperfect Cadence.—All forms of the Plagal and Authentic Cadence of the major or minor scale which do not comply with the conditions mentioned in **124** are IMPERFECT CADENCES; viz.:

A.—A cadence (plagal or authentic) in which the tonic triad (final chord) closes with the *third* (*a*) or *fifth* (*b*) in the upper voice.

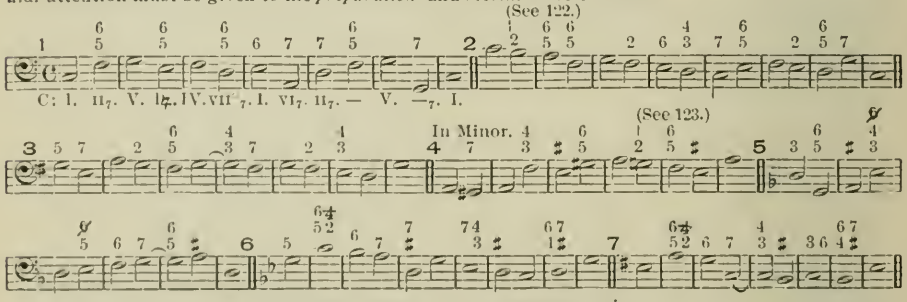
B.—A cadence (plagal or authentic) in which the tonic triad closes with the chord of the sixth (*c*), or four-six (*d*).



C.—A cadence in which the Bass moves from any inversion of the dominant chord ($\frac{6}{5}$ at *e*, $\frac{4}{3}$ at *f*, $\frac{4}{2}$ at *g*,) or sub-dominant chord (6 at *h*, $\frac{6}{4}$ at *i*,) to the tonic triad.



EXERCISE XLV.—Work out the given Bass and mark the degrees as in first example. Particular attention must be given to the *preparation* and *resolution* of the seventh.



QUESTIONS TO CHAPTER VII.

125—**121.** What must be avoided in the resolution of the diminished sept-chord? 126—**121.** What is a passing seventh? 127—**122.** Under what conditions may the seventh of the collateral sept-chords enter unprepared? 128—**123.** Why cannot the leading-tone of the minor scale be employed as passing seventh? 129—**124.** What three conditions are necessary for a perfect cadence?

Chapter VIII.

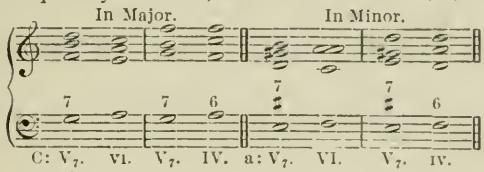
DECEPTIVE CADENCES.

A.—IRREGULAR RESOLUTION OF THE DOMINANT SEPT-CHORD.

126. **Deceptive Cadence.**—We have seen in 96 that the regular resolution of the *dominant sept-chord* naturally resolves into the tonic triad, and in 97, why these two chords are so closely related. We have also seen in 124 what conditions were necessary to form a PERFECT CADENCE; and in 125 we have examples of the resolution of the *dominant sept-chord* (to the tonic triad), which formed IMPERFECT CADENCES.

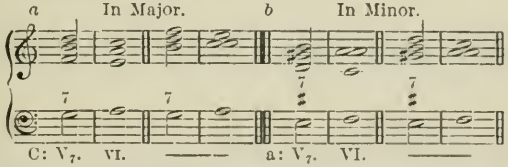
In all these cases the dominant sept-chord regularly resolves into the tonic triad of the major or minor scale.

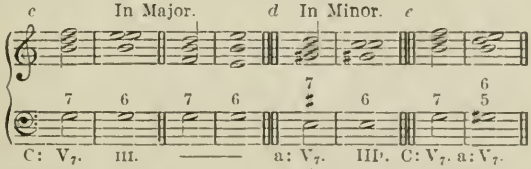
N. B.—If the DOMINANT SEPT-CHORD resolve *to any other than the tonic triad* the resolution will be irregular, as the chord which the ear expects (tonic triad) does not follow; the ear is consequently deceived, which is termed a DECEPTIVE CADENCE; thus.



REMARK.—In all deceptive cadences the essential point to be observed is the treatment of the *fundamental* and *seventh*. (See 108—N. B.)

127. **Deceptive Cadence—Seventh Descending.**—The seventh in the dominant sept-chord is the tone which constitutes the *essential* dissonant interval (95—N. B.); as such it descends one diatonic degree, to the *third* of the tonic triad (96—A).

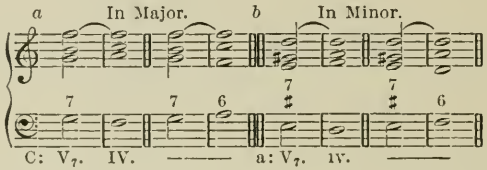
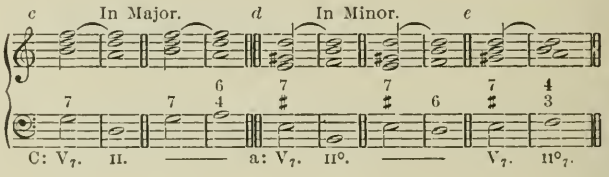
A.—The SEVENTH may descend one diatonic degree to a tone which constitutes the *fifth* of the triad upon the VI. degree; viz.:

B.—The SEVENTH may descend one diatonic degree to a tone which constitutes the *fundamental* of the triad upon the III. degree.

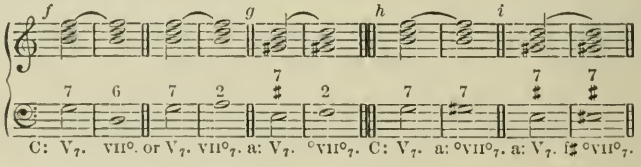


REMARK.—The deceptive cadence at *a* and *b* are frequently employed: those at *c* rarely, while the example at *d* is altogether impracticable, as the dominant sept-chord resolves into the *augmented triad*, which is a very harsh discord. The deceptive cadence at *e* is, however, often employed in Modulation with chords of other keys. See 148.

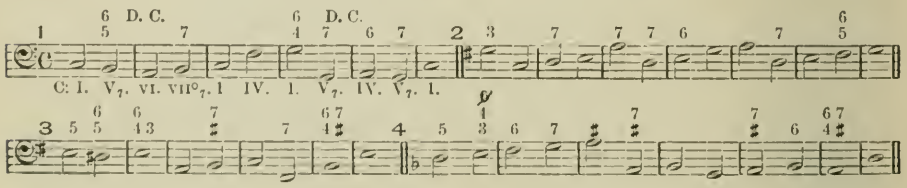
128. Deceptive Cadence—Seventh Remaining Stationary.—In the regular resolution of the dominant sept-chord the seventh moves down one diatonic degree.

N. B.—The seventh in the dominant sept-chord may remain stationary and become the *fundamental*, *third*, *fifth*, or *seventh* of another chord.

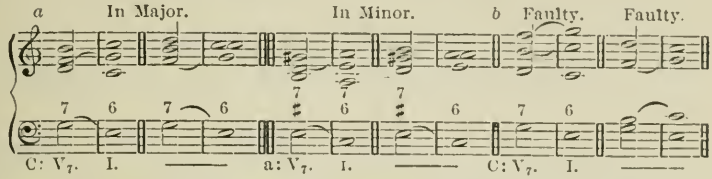
A.—The seventh in the dominant sept-chord may remain stationary and become the *fundamental* of the triad upon the IV. degree:

B.—The seventh may remain stationary and become *third* of the chord upon the II. degree.

C.—The seventh, if sustained, may become *fifth* of the chord upon the VII°. degree, at *f* and *g*.

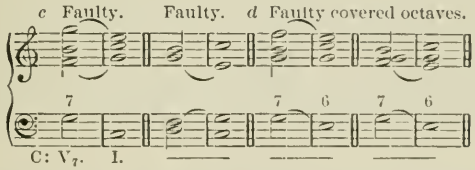
D.—The seventh, if sustained, may become *seventh* of a *diminished sept-chord* of some other key (in Modulation. See 148), at *h* and *i*.

REMARK.—Of the foregoing examples those at *a*, *b*, *c*, are frequently employed; those at *e*, *g*, *h*, and *i*, less so; while the examples at *d* and *f* are rarely used, as the *diminished triad* following is harmonically unsatisfactory.

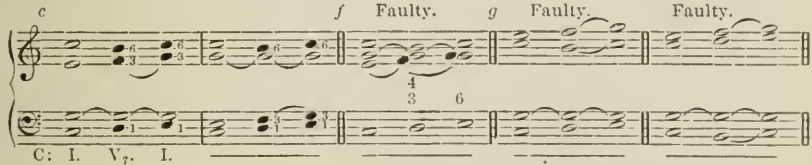
EXERCISE XLVI.—Work out the given Bass, and mark the degrees and the DECEPTIVE CADENCES with a D. C., in the *descending* and *stationary* sevenths, as in Example 1.



129. **Authentic Cadence—Seventh Ascending.** — In the regular resolution of the dominant sept-chord the seventh descends one diatonic degree. There are instances, however, when the seventh may ascend. These are as follows:

A.—The seventh in the dominant sept-chord may ascend one degree if the Bass moves from the fundamental DOWN *to the third of the tonic triad* (*a*).

The seventh ought to descend to the third of the tonic triad (**Rule VI.—96**), but this would (if the Bass descends to the third) be impossible in the above instance, as a very objectionable covered octave (57—B) between the *descending seventh* and the *descending Bass* would be the result (*d*).

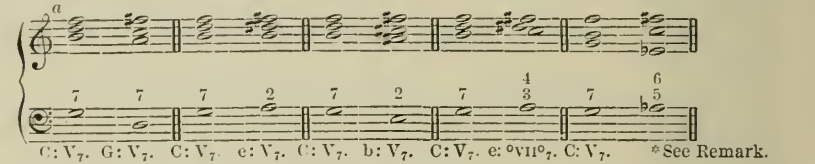
N. B.—The progression of the Bass downwards from the fundamental of the dominant sept-chord to the *third* of the tonic triad—on account of which the seventh is obliged to move one degree upwards (*a*), can not be employed in any other voice (as at *c*). The Bass being an outer voice (35) and the most weighty of the four, has consequently sufficient power to make this step downwards to the *third* (to which the seventh ought to descend) noticeable and decisive, while the upper voices have not; e. g.:

MAXIM.—THE COVERED OCTAVE RESULTING IF THE SEVENTH AND THE BASS DESCENDS TO THE *third of the tonic triad* MUST ALWAYS BE AVOIDED (*d*).

B.—The seventh may likewise ascend one degree in the middle parts, if it move up in *thirds*, *sixths*, or in *six-chords*, as at *e* (see 86—C), which gives these progressions the character of *passing-tones* (161,165,) *upwards*. In this case the seventh must be kept at a distance from the fundamental, which MUST REMAIN STATIONARY (*e*).

The closeness of the ascending seventh, at *f*, to the fundamental would be faulty, as the passing character could not distinctly be noticed.

REMARK.—The examples at *b* and *g* are faulty on account of the *parallel fifths*, which will always occur whenever the seventh (if ascending) comes to lie above the leading-tone (86—example *d*), the regular resolution of which is upward one degree (96—C).

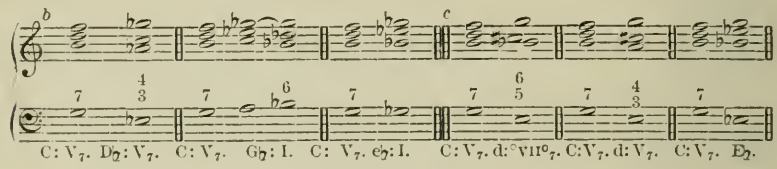
130. Deceptive Cadence—Seventh Ascending.—In **129** it was shown under what conditions the seventh might ascend in the *regular close* (AUTHENTIC CADENCE). The seventh may likewise ascend in the DECEPTIVE CADENCE, but only in *modulation* (**148**); that is, in connection with chords belonging to other keys.

A.—The seventh may ascend *one chromatic half-step* (9), *a*.



B.—The seventh may ascend *one diatonic half-step*, at *b*.

C.—The seventh may ascend a *whole step*, at *c*.

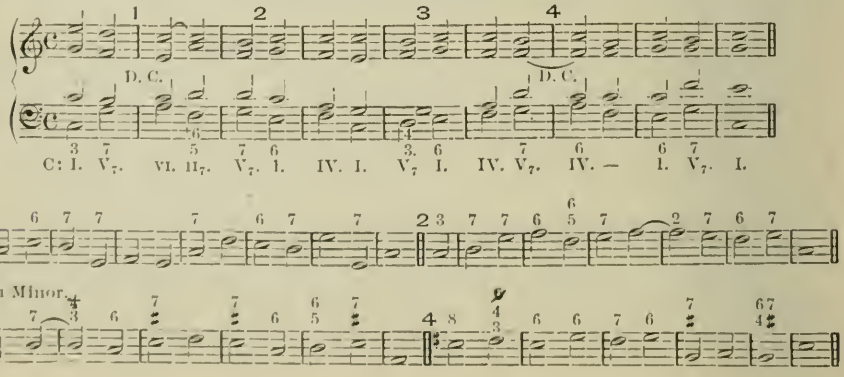


N. B.—In all irregular resolutions of the dominant sept-chord the *pure leading of the voices* (77) will be the chief consideration (see **Remark—126**). As the Soprano (upper voice) and the Bass (lower voice) are the outer voices (35), they are therefore more conspicuous; any irregular resolution of a dissonant interval in these voices consequently demands more care in treatment.

MAXIM.—IN DECEPTIVE (irregular) CHORD-CONNECTIONS THE CONTRARY MOTION OF THE BASS WITH THE UPPER VOICE WILL ALWAYS BE MOST SATISFACTORY.

REMARK.—The deceptive cadences in A, B, C, are but a few examples of possible chord-connections. The student should aim to become familiar with chord-connections of this class, but must be careful to observe the correct treatment of the fundamental and seventh (**126—Remark**). The chord at * will be explained in **144**.

EXERCISE XLVII.—Work out the following examples in open position (**62**), as in example below, and note the deceptive cadences by a D. C.; likewise mark the degrees. In the following example at 1, see **127—A**; at 2, see **129—A**; at 3, see **129—B**; at 4, see **128—A**.



B.—IRREGULAR RESOLUTION OF THE COLLATERAL SEPT-CHORDS.

131. Irregular Resolution of the Seventh of the Collateral Sept-Chords.—The seventh in the collateral sept-chords may resolve irregular (like the seventh in the *dominant sept-chord* at **127**, **128**, and **130**), but these irregular resolutions do not constitute *deceptive cadences.* (**126**—N. B.)

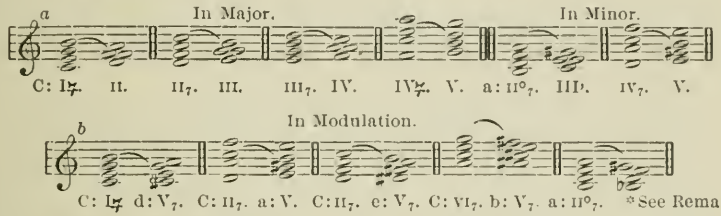
These chords have neither the close relation to the tonic triad (see **97**), the definite inherent character of resolution which is contained in the dissonant intervals of the dominant sept-chord (**95**), nor does their regular resolution establish a cadence, but only an imitation of a cadence. (See **111**.)

N. B.—*The irregular resolutions of the dominant sept-chord* ONLY *form deceptive cadences.*

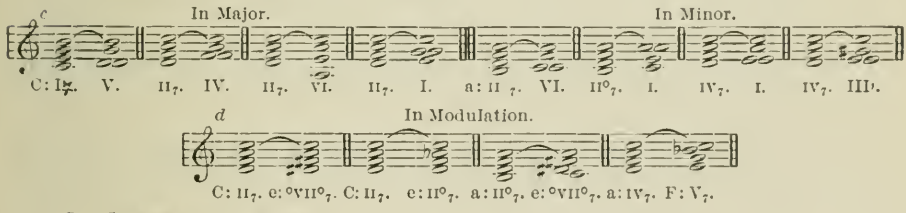
The regular resolution of the sept-chords formed upon concords (**111**) naturally resolve into the *triad* or *sept-chord* a fourth degree above or a fifth below (**114**—N. B., **116**—N. B.).

The following are a few examples of irregular resolutions of collateral sept-chords.

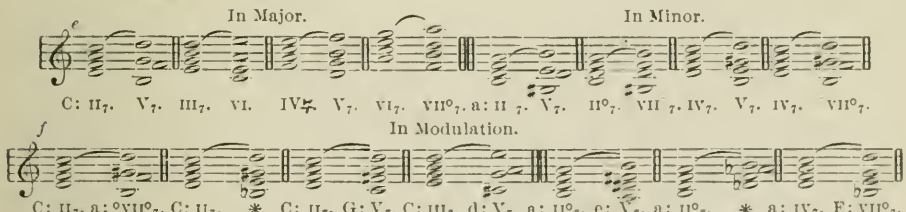
A.—SEVENTH DESCENDING.



B.—SEVENTH REMAINING STATIONARY.



C.—SEVENTH ASCENDING.

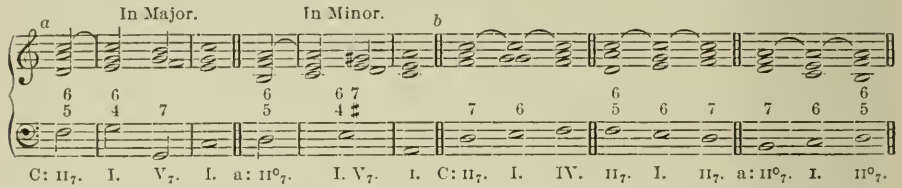

e
In Major.
In Minor.
C: II7. V7. III7. VI. IV♯. V7. VI7. VII°7. a: II 7. V7. II°7. VII 7. IV7. V7. IV7. VII°7.
f
In Modulation.
C: II7. a: °VII°7. C: II7. * C: II7. G: V7. C: III7. d: V7. a: II°7. e: V7. a: II°7. * a: IV7. F: VII°7.

MAXIM.—In the irregular resolution of the sept-chords the *seventh* may descend (*a*, *b*,), remain stationary (*c*, *d*,), or ascend (*e*, *f*,), but never *descend* or *ascend* in SKIPS (disjunct movement—see **55**).

REMARK.—It may easily be observed that the irregular resolutions of the above chords which occur in modulation with chords of other keys), at *b*, *d*, *f*, are the most satisfactory, as the chord of the new key is either a *dominant sept-chord*, a *diminished sept-chord*, a *diminished triad with minor seventh* or an *augmented* five-six or three-four chord at *, which will be explained in **143**, **144**). These chords are of a *definite dissonant character*, which distinctly establishes the tonality of the new key (see **118**—N. B.).

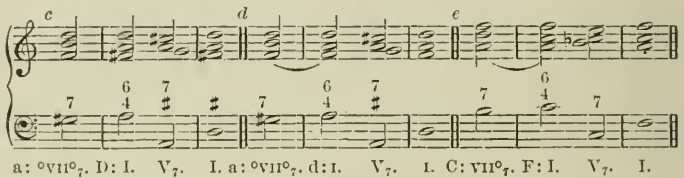
132. Adaptability of the Chords upon the II_7. and $VII°_7$. Degree.—The sept-chords upon the II. and VII°. degree of the major and minor scale are especially adapted *through their irregular resolution* to make the AUTHENTIC CADENCE more effective.

A.—The first inversion (five-six) of the sept-chord upon the II. degree of the major and minor scale frequently precedes the four-six cadence (90—C: *c*, *d*,), at *a*.



This irregular resolution of the seventh (the seventh remaining stationary—131—B) may likewise occur in other instances (as at *b*).

B.—The irregular resolution of the *diminished sept-chord* (117) is especially adapted in connection with the four-six cadence (89—*a*, *b*,) in effecting *modulation* (148) by moving its fundamental (leading tone, 115—F) *one diatonic half-step up*—not to the keynote of the key in which it is found, but to the four-six chord of the *tonic* triad (major, at *c*, or minor, at *d*,) of the new key; viz.:

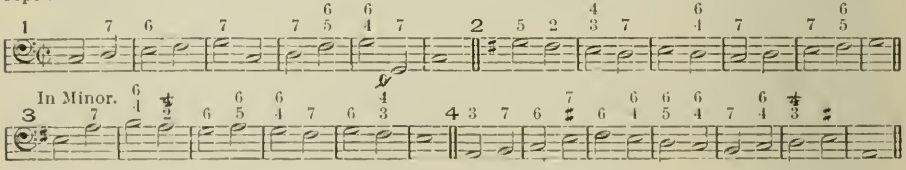


N. B.—In the foregoing examples the *seventh* (of the diminished sept-chord) *ascends one chromatic half-step* if the modulation results into the tonic triad of the major scale (*c*), and *remains stationary* if the modulation results into the tonic triad of the minor scale (*d*).

C.—The sept-chord upon the VII°7. degree of the major scale is likewise employed in connection with the four-six chord in *modulation*, by moving the fundamental up *one diatonic half-step* to the four-six chord of the tonic triad of the new major scale—the seventh in this case *remains stationary* (*e*).

EXERCISE XLVIII.—Write out the Cadences, as at *a* five-six of II. degree preceding four-six close, in all the major and minor scales.

EXERCISE XLIX.—Work out the Bass below, and indicate the irregular progressions of the sept-chords.



QUESTIONS TO CHAPTER VIII.

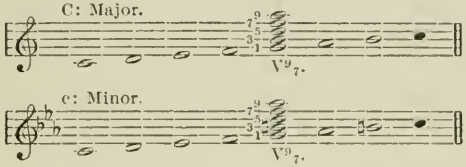
129—126. What is a deceptive cadence? 130—126. What must be especially observed in a deceptive cadence? 131—127, 128, 130. How may the seventh of a sept-chord resolve in a deceptive cadence? 132—129. Under what conditions may the seventh in the dominant sept-chord ascend? 133—131. Which sept-chord, if irregularly resolved, forms a deceptive cadence? 134—131. In the irregular resolution of a sept-chord which progression of the seventh must be avoided? 135—132. Which sept-chord of a scale in its irregular resolution is brought in connection with the four-six cadence of the major and minor scale?

Chapter IX.

CHORDS OF THE NINTH, ELEVENTH, ETC.

133. Chords of the Ninth of the Major and Minor Scale.—The dominant sept-chord is the principal sept-chord of the major and minor scale (97).

By adding a third to the seventh we obtain a chord consisting of *five tones*, which contains the intervals 1-3-5-7-9; this chord is consequently termed a *chord of the ninth*, and as it is formed upon the dominant it is called: CHORD OF THE DOMINANT NINTH; e. g.:



N. B.—The ninth in the chord of the dominant ninth of the major scale is a *major ninth;* in that of the minor scale a *minor ninth.*

REMARK.—The chord of the ninth formed upon the dominant of the major and minor scale is the most important (essential) chord of the ninth, as it has real *harmonic significance*, which no other chord-formation forming ninths possesses (see 138).

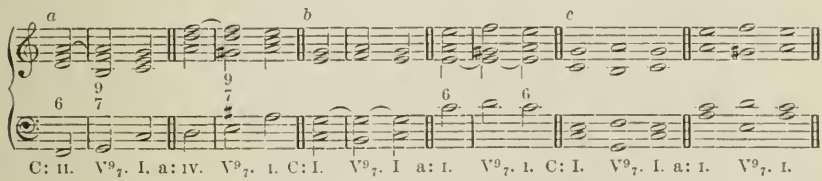
134. Application of the Chords of the Ninth.—As the chord of the ninth is formed upon the dominant sept-chord, the treatment of the intervals forming the dominant ninth will consequently be the same as that of the dominant harmony (96, 98).

N. B.—The dominant ninths are mild dissonances, of which the ninth of the major scale is the mildest; that of the minor scale is less so (133—N. B.).

The INTRODUCTION of these dissonant ninths demand the following conditions:

A.—Either the *ninth* must be PREPARED (being the dissonant interval), *a;*

B.—Or the *fundamental* must be PREPARED. In the latter case the ninth may enter free (unprepared) if it remains at a distance of a ninth from the root (*b*). See 137—Maxim.



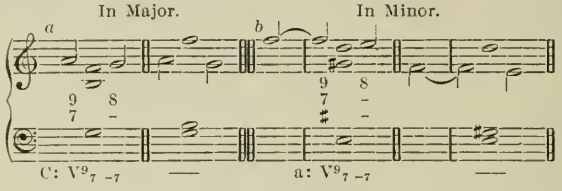
C.—The RESOLUTION of the chord of the *dominant ninth* resolves like the *dominant sept-chord* (see 135) into the tonic triad (*a, b, c,*). In these two chords (dominant ninth and its resolution into the tonic triad) are contained all the *diatonic* tones of the scale (see 97). The tonality of the key is thus definitely established through the connection of these two chords.

REMARK.—The preparation of the *ninth* (at *a*) or *fundamental* (at *b*) make the introduction of the dissonant intervals of the chord less harsh. Cases, however, where both (*root* and *ninth*) enter free, simultaneously, as at *c*, are employed in certain instances.

135. **Resolution of the Chord of the Ninth.**—The complete chord of the ninth embraces *five tones* (**133**). As the study of harmony is based upon the rules governing *four-part writing* (**77**) we will be obliged to omit one of the five tones of the chord.

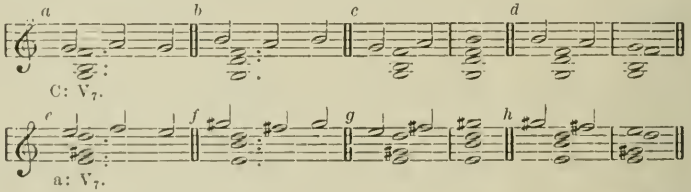
MAXIM.—In the chord of the ninth the *fifth* may be omitted (see 98).

A.—The RESOLUTION of the chord of the dominant ninth results (like the dominant sept-chord—96—*f*, *g*,) into the tonic triad (see **134**—*a*, *b*, *c*,); *the ninth descends one diatonic degree* to the fifth of the tonic triad.

B.—The *ninth* may resolve into the dominant sept-chord, in which case *the ninth descends one diatonic degree*, while the other tones remain stationary, *a*, *b*.

REMARK.—The resolution of the ninth in the foregoing examples does not definitely establish the character of the chord of the ninth. The above ninths (if prepared, as at *b*,) have more the character of *suspensions* (**150**), or (if unprepared, as at *a*,) of *appoggiaturas* (**163**). The chord of the ninth does not resolve direct into the tonic triad, (as at *a*, *b*, *c*, in **134**,) but into the dominant sept-chord. This resolution does therefore not establish the character of a chord of the ninth as definitely as is the case in **134**—**C**, where the chord of the ninth resolves into the tonic triad direct. This alone gives it *harmonic significance*.

136. **Irregular Application of the Ninth.**—The ninth in the chord of the dominant ninth does not always establish the chord of the ninth (**135**—Remark).

A.—The *dominant ninth* may be employed (in an upper voice) by moving from the ROOT *of the dominant sept-chord* up one degree to the *ninth* and back (*a*, *e*,), or from the THIRD down one degree to the *ninth* and back (*b*, *f*,).

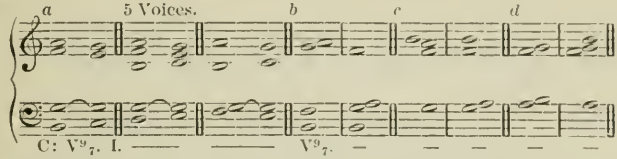
B.—The *dominant ninth* may be employed by ascending from the ROOT *of the dominant sept-chord* diatonically through the ninth up to the *third* of the chord (*c*, *g*,), or descending from the latter (*third*) through the ninth back to the ROOT (*d*, *h*,).

N. B.—At *a*, *b*, *c*, and *f*, the ninth has the character of *changing-note* (**162**), at *c*, *d*, *g* and *h*, of a *passing-note* (**161**); in none of these examples has it the character of a proper *ninth-chord*, which it has at *a*, *b*, *c*, in **134** (see **135**—Remark).

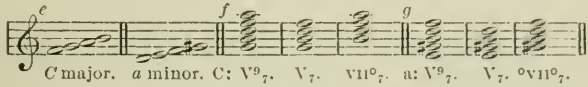
REMARK.—At *f*, *g*, and *h*, we employed the major ninth (F♯) in the minor scale instead of the minor ninth (F). This was conditioned by the *melodic requirements* of the melodic minor scale (see **123**). More of this in **161**—**B**.

137. Inversions of the Chord of the Ninth.—The inversions of the chord of the dominant ninth are employed in certain instances only.

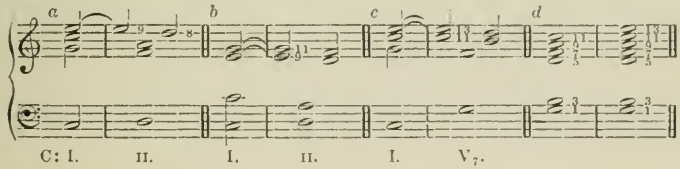
MAXIM.—The *ninths* in their applications must remain at a distance of a ninth from the root (*a*); *never a second* (as at *b*), nor be placed *below* the root (*d*).

A.—Any inversion of the chord of the ninth is practicable *if the ninth appears no nearer than a ninth to the fundamental* (*a*), and (in the major scale) *if the ninth lies above the third of the chord* (*a*), not below, as at *c*, *d*. (See Remark.)

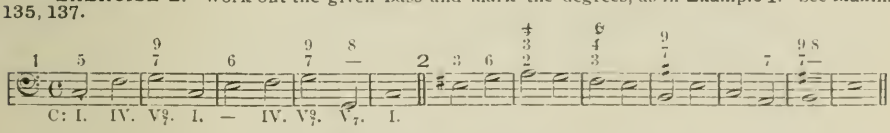
B.—The inversion which places the ninth in the Bass is impracticable, as the ninth would appear below the *fundamental* and *third*, which is extremely harsh (*d*).

REMARK.—In the chord of the dominant ninth are found four consecutive diatonic tones of the scale (*e*, which sound extremely harsh if they are not brought into proper harmonic distances, as at *a*, *f* or *g*. The chord of the ninth embraces, besides the dominant sept-chord, also the sept-chord upon the VII°. degree (at *f*, *g*,). The application of the sept-chord upon the VII°. degree of the major scale demands certain considerations (see 118—C), which the sept-chord upon the VII°. degree of the minor scale (diminished sept-chord) does not require (see 118—B).



138. Accidental Chords of the Ninth, Eleventh, Etc. — The only proper chord of the ninth is the dominant ninth (133—Remark).

Other chords *having the appearance of ninths* may be formed (*a*), but they neither have the character of a chord of the ninth, nor do they receive the treatment as such (135—Remark, 136—N. B.). They are consequently classed with the ACCIDENTAL CHORD FORMATIONS (150, 161, 162, 163,).

REMARK.—Accidental chord-formations, as at *a*, *b*, and *c*, are not classed among the real chords, but are treated as *suspensions* (150—N. B., 157—Remark and *appoggiaturas* 163). Some theorists treat them as real chords, whose original form would be as at *d*. This is a remnant of a primitive and obsolete system, which, from the standpoint of our modern harmonic development and treatment, is altogether impracticable.

EXERCISE L.—Work out the given Bass and mark the degrees, as in Example 1. See Maxim 135, 137.



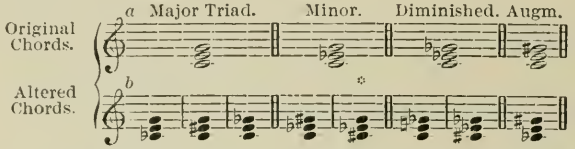
QUESTIONS TO CHAPTER IX.

136—133. What is a chord of the ninth? 137—133. Upon which degree of the major and minor scale is the chord of the ninth formed? 138—133. What kind of a ninth do we find in the chord of the ninth of the major and minor scale? 139—135. How does the ninth resolve? and into which triad does the chord of the ninth resolve? 140—135. Which interval may be omitted in the chord of the ninth? 141—138. How may the ninth be treated besides as a chord of the ninth?

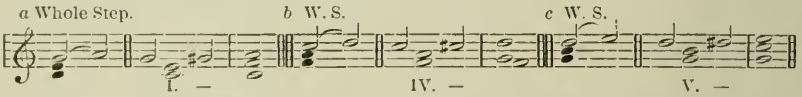
Chapter X.

ALTERED CHORDS.

139. **Chromatic Alteration—Altered Chords.**—The different kinds of triads found in the major and minor scale are either *major* (**26**), *minor* (**27**), *diminished* (**50**), or *augmented* (**70**) triads. See **76.**

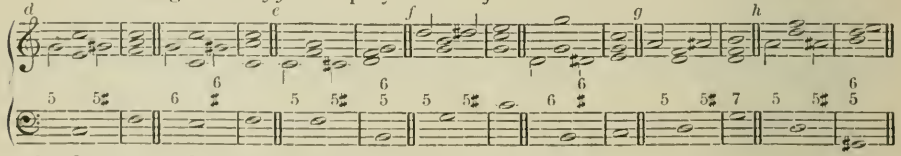
If one or more tones of an original chord are *chromatically altered* (**6**) the result will be either another *original chord* (as at *a*), or an entirely new formation not found among the chords of the major and minor scale (as at *b*); the latter are therefore called ALTERED CHORDS.

N. B.—Only *one* of the above ALTERED CHORDS has an *harmonic significance*, that at *. It is called the DOUBLE DIMINISHED TRIAD, as it embraces a *diminished third* and a *diminished fifth* (**142**). The others are the result of chromatic passing-tones; they have no harmonic importance, however, and are consequently treated as *passing chords* (**167**).

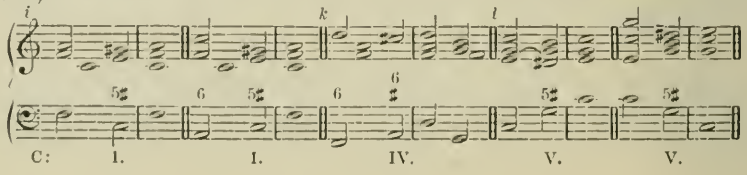
140. **The Augmented Triad as Altered Chord.**—The augmented triad (**70**) is rarely employed as triad upon the III'. degree of a minor scale (see **116—Remark**). It is, however, frequently formed by raising (altering) the fifth of the major triads upon the I., IV., and V. degree of the major scale, which (by chromatically raising the fifth) become augmented triads: ALTERED CHORDS (*a*, *b*, *c*,).



MAXIM.—The *augmented fifth* may be employed in any major (*a* to *f*) or minor triad (*g*, *h*), *if* the step from the fifth of these triads to the next degree of the scale upwards forms the interval of a *diatonic* WHOLE-STEP: major second (as at *a*, *b*, *c*,). The *augmented fifth must* in this case (as dissonant interval—**72—A**) ALWAYS ASCEND *one diatonic half-step*, as it has the character of a *chromatic passing tone* upwards (**161**).

A.—The *augmented fifth* employed in major and minor triads as PASSING FIFTH.



B.—The *augmented fifth* employed in triads, the FIFTH ENTERING FREE (see **141—N. B.**).

141. **The Augmented Fifth in Sept-Chords.** — In 140 the augmented fifth was employed as *passing* and *free-entering fifth* in major and minor triads, principally, however, in the triads upon the I., IV., and V. degree of the major scale.

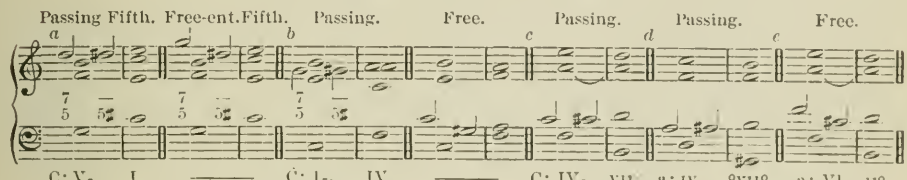
N. B.—The augmented fifth may likewise be employed in sept-chords as passing or free-entering fifth.

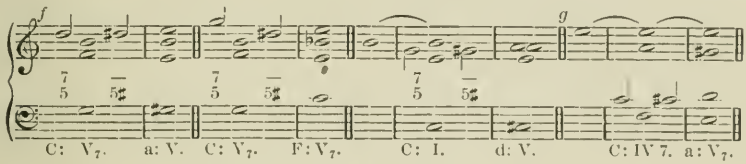
A.—Upon the V. degree (dominant sept-chord of the major scale only, *a*)—frequently employed.

B.—Upon the I. degree (of the major scale only, *b*)—*less frequently employed.*

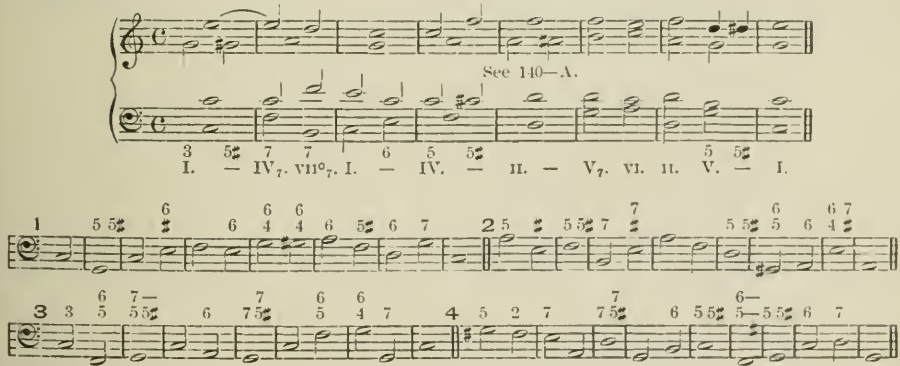
C.—Upon the IV. degree (of the major (*c*) and minor scale, *d*)—*rarely* used.

D.—Upon the VI. degree (of the minor scale only, *e*)—very rarely used.



E.—In Modulation, with regular (*f*) and irregular resolution (*g*) of the seventh (see 131—*b*, *d*, *f*).

REMARK.—The practical value of the above examples can be judged of *only* from the standpoint of FITNESS and NECESSITY. Such and many other (more unusual) combinations may occur in a composition, brought about by the *melodic leading of the voices, the working out of a subject or motiv*, or *by a combination of motivs*. The practical application can be learned *only* through the study and *analysis* especially of classical compositions. See Remark—149.

EXERCISE LI.—Work out the figured Bass in open position (62) as in example below. Exercises 1 and 2 employ triads with *augmented fifths*; exercises 3 and 4 employ sept-chords and triads with *augmented fifths*. The — after a figure signifies that the note indicated by the figure should be retained (as in examples *a*, *b*, and *f* above). Regarding the disjunct movement of the voices, see 91—Exercise XXXII.



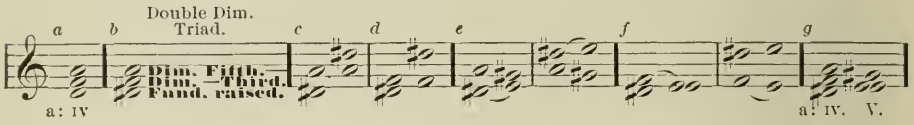
142. Augmented Six-Chord — Altered Minor Triad. — It was stated in 139—N. B. that the chromatic alteration of a tone (the fundamental) of a minor triad formed the only *altered chord* which possessed harmonic significance.

N. B.—The chromatic raising of the fundamental of a minor triad constitutes a chord consisting of a *diminished third* and a *diminished fifth* (*b*). This altered chord is called the DOUBLE DIMINISHED TRIAD.

A.—The RESOLUTION of this triad is conditioned by its two dissonant intervals—*diminished fifth*, and its inversion—*augmented fourth* (*c*), and *diminished third*, and its inversion—*augmented sixth* (*d*).

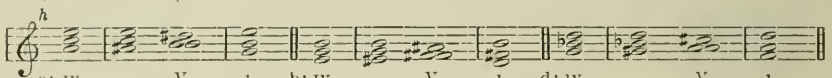
The *fundamental* (which is chromatically raised) always ascends one diatonic half-step (*e*, *f*,), the *diminished fifth* descends one diatonic half-step (*e*, *g*, *h*, *i*,), or, *if it be doubled* (as at *k*, *l*,), ascends a whole-step. See Maxim II.

The *third* always descends one diatonic half-step (*f* to *l*,).

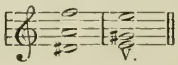


MAXIM I.—The natural resolution of the two dissonant intervals of the *double diminished triad* (diminished fifth, *e*, and diminished third, *f*,) results into the interval of a major third (*g*). This interval *always* constitutes two tones (fundamental and third) of the DOMINANT TRIAD (*g*, *h*,).

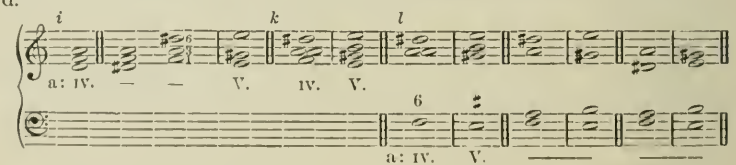
REMARK.—This decided resolution of the double diminished triad into the *dominant triad* establishes the former as the *altered minor triad* upon the IV. degree of the same major scale in which the dominant triad occurs (*h*). *The relation* of these two triads (IV., V., has been exemplified in the formation of the simple extended cadence—**75—A**; it becomes much more decided, however, through the alteration of the root, thus:



The resolution of this triad is rarely employed in its fundamental position, however, (as at *g* and *h*), as the voices lie too close to each other, which in three parts does not give them a favorable position; a dispersed position (**47**) would be more acceptable, thus:



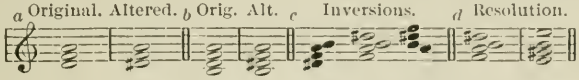
B.—The *first inversion* of the double diminished triad gives us the chord of the AUGMENTED SIXTH (the diminished third by inversion becoming an augmented sixth, *d*, *f*,); this chord, on account of its resolution into a favorable position of the dominant triad (*i*, *k*,), is frequently employed; the *second inversion* (four-six), is scarcely ever used.



MAXIM II.—In the chord of the *augmented sixth* the only tone which can be doubled in four-part writing is the *fifth* of the fundamental or (which is the same) the *third* of the six-chord (*k*, *l*,).

143. The Chord of the Augmented Three-Four-Six. — The three tones forming the *double diminished triad*, at *a* (142—N. B.), are likewise found in the sept-chord upon the II°. degree of the minor scale, *by raising* (altering) *the* THIRD *of this chord* (*b*).

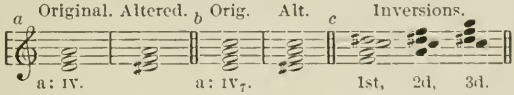
N. B.—The *second inversion* (3-4-6, at *c*,) of this sept-chord gives us the AUGMENTED THREE-FOUR-SIX CHORD, which naturally resolves into the *dominant triad* (*d*). See Remark—144.



REMARK.—The resolution of this sept-chord results like all sept-chords to the triad *a fourth degree above or a fifth below* (cadence progression—111—N. B.). The resolution of the augmented sixth (inverted diminished third—142—A) makes the connection of this chord with the dominant triad much more decided, as at *d*.

144. The Chord of the Augmented Five-Six.—The three tones of the *double diminished triad*, at *a* (142—N. B.), are found in another sept-chord, namely: that upon the IV. degree of the minor scale *by raising* (altering) *the* FUNDAMENTAL *of this chord* (*b*).

N. B.—The *first inversion* (5-6) of this sept-chord gives us the AUGMENTED THREE-FIVE-SIX CHORD, at *c*, which is frequently employed.



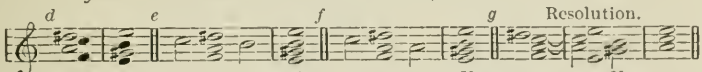
MAXIM.—The RESOLUTION of the augmented five-six chord results like the *augmented three-four-six* (143—N. B.) and the *augmented six chord* (142—B) into the *dominant triad* (as at *d*).

The direct resolution of this chord into the dominant triad, however, will always produce *parallel fifths*, as at *d*. These can be avoided by resolving the *augmented five-six chord* either—

A.—Into the *augmented three-four-six chord*, as at *e*; or

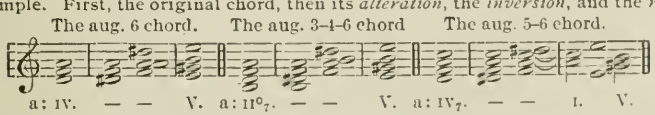
B.—Into the *augmented six-chord*, as at *f*; or

C.—Into the *four-six chord* of the tonic triad, then the dominant triad, as at *g*.

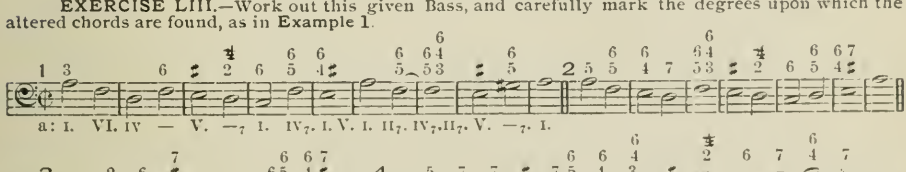


REMARK.—The *second* and *third* inversions (at *c*), as also the *first* and *third* inversions of the chord in 143, at *c*, and *second* inversion of the double dim. triad (142—B) are very rarely employed.

EXERCISE LII.—Form the aug. 6, the aug. 3-4-6, and the aug. 5-6, in all the minor scales, as in following example. First, the original chord, then its *alteration*, the *inversion*, and the *resolution*.



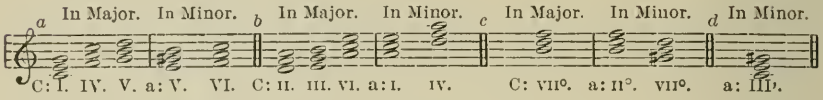
EXERCISE LIII.—Work out this given Bass, and carefully mark the degrees upon which the altered chords are found, as in Example 1.



145. Review of Fundamental and Derived Chords.

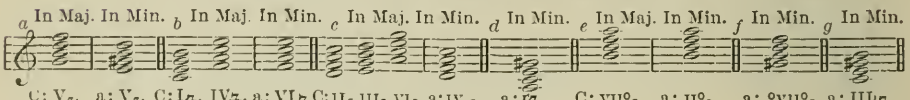
A.—Fundamental Triads:

1.—Major Triad (26), at *a* (see 146—A, 1.);
2.—Minor Triad (27), at *b* (see 146—A, 2.);
3.—Diminished Triad (50) at *c* (see 146—A, 3.);
4.—Augmented Triad (70), at *d*.



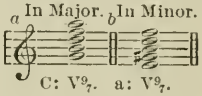
B.—Fundamental Sept-Chords:

1.—Major Triad with *minor seventh* (93), *a*;
2.—Major Triad with *major seventh* (107—A, 115—E,) *b*;
3.—Minor Triad with *minor seventh* (107—B, 115—D,) *c*;
4.—Minor Triad with *major seventh* (115—A), *d*;
5.—Diminished Triad with *minor seventh* (107—C, 115—B,), *e*;
6.—Diminished Triad with *diminished seventh* (115—F), *f*;
7.—Augmented Triad with *major seventh* (115—C), *g*.


a In Maj. In Min. b In Maj. In Min. c In Maj. In Min. d In Min. e In Maj. In Min. f In Min. g In Min.
C: V7. a: V7. C: I7. IV7. a: VI7. C: II7. III7. VI7. a: IV.7. a: I7. C: VII°7. a: II°7. a: °VII°7. a: III+7.

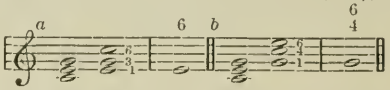
C.—Fundamental Chords of the Ninth:

1.—Major Triad with *minor seventh* and *major ninth* (133), *a*;
2.—Major Triad with *minor seventh* and *minor ninth* (133), *b*.



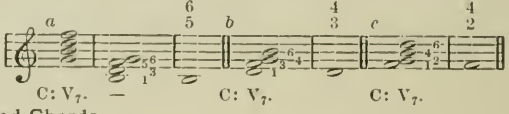
D.—Inversion of the Triad—Derived Chords:

1.—Six-Chord—First Inversion (81), *a*;
2.—Four-Six Chord—Second Inversion (82), *b*.



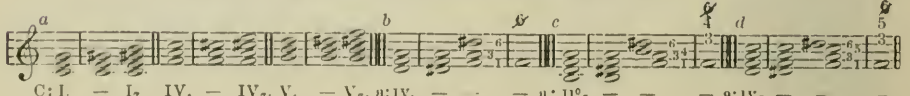
E.—Inversion of the Sept-Chord:

1.—Five-Six Chord—First Inversion (101), *a*;
2.—Three-Four Chord—Second Inversion (102), *b*;
3.—Two-Four Chord—Third Inversion (103), *c*.



F.—Altered Chords:

1.—The Augmented Triad (140), at *a*;
2.—The Augmented Six Chord (142), at *b*;
3.—The Augmented Three-Four-Six Chord (143), at *c*;
4.—The Augmented Five-Six Chord (144), at *d*.



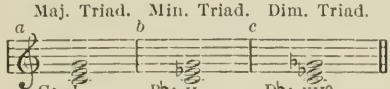
146. **Uncertain Location of Chords.**—As shown in 79 the *major*, *minor*, and *diminished triads* have no definite location. Some *sept-chords* are likewise found upon different degrees of different keys, which makes their location uncertain.

A.—The Triads.

1.—One and the same MAJOR TRIAD may be found in *five* different keys: upon the I., IV., and V. degree of a major and V. and VI. degree of a minor key (*a*).

2.—A MINOR TRIAD may be found in *five* different keys: upon the II., III., and VI. degree of a major and I. and IV. degree of a minor key (*b*).

3.—A DIMINISHED TRIAD may be found in *three* different keys: upon the VII° degree of a major and II°. and VII°. degree of a minor key (*c*).



C: I. E♭: II. D♭: VII°.
or G: IV. or A♭: III. or b♭: II°.
or F: V. or E♭: VI. or d♭: VII°.
or f: V. or c: I.
or e: VI. or g: IV.

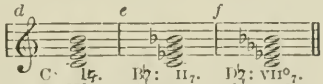
EXERCISE LIV.—Form a *major*, a *minor*, and a *diminished triad* upon the tones D, A, E, and F (or any other tone) and locate these triads in the keys in which they are found, as above.

B.—The Sept-Chords.

1.—A MAJOR TRIAD *with a* MAJOR SEVENTH may be found in *three* different keys: upon the I7. and IV7. degree of a major and VI7. degree of a minor key (*d*).

2.—A MINOR TRIAD *with a* MINOR SEVENTH may be found in *four* different keys; upon the II_7., III_7., and VI_7. degree of a major and the IV_7. degree of a minor key (*e*).

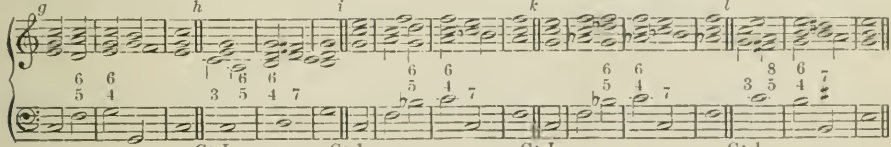
3.—A DIMINISHED TRIAD *with a* MINOR SEVENTH may be found in *two* different keys: upon the $VII°_7$. degree of a major and $II°_7$. degree of minor key (*f*).



C: I7. E♭: II_7. D♭: $VII°_7$.
or G: IV7. or A♭: III_7. or b♭: $II°_7$.
or e: VI7. or E♭: VI_7.
or g: IV_7.

EXERCISE LV.—Form major triads with a major seventh, minor triads with a minor seventh, and diminished triads with a minor seventh, and locate these sept-chords in the keys they are found, as above.

REMARK.—As seen in the example at *a*, a *major* and *minor triad* is found in FIVE DIFFERENT KEYS. The C major triad is thus found in C, G, and F major and *f* and *e* minor. In order to establish a key definitely it is necessary, however, to bring this chord triad in connection with other chords of the key we desire to pass to. The chords forming the extended 4-6 cadence 90—C) definitely establish the tonality of a key (see 97, 89). If a *major* or a *minor triad* is therefore followed by the extended 4-6 cadence of the keys in which the triad is found (*a* and *b*), we then establish the tonality of this new key (148—N. B.), thus:



C: I. II_7. I. V_7. I. G: IV. II_7. I. V_7. I. F: V. I. II_7. I. V_7. I. f: V. I. $II°_7$. I. V_7. I. e: VI. $II°_7$. I. V_7. I.

EXERCISE LVI.—Place a *major* and a *minor triad* in five scales (as at *a* and *b*, and add the extended 4-6 cadence, as at *g*, *h*, *i*, *k*, and *l*. The 4-6 cadence with the 5-6 chord of the II_7. preceding is the most effective (see 132—A, *a*, and PERFECT CADENCE—124).

147. **Chords Definitely Located.**—The *augmented triad* (see **79**—N. B.) and the *sept-chords* enumerated below are found *only* upon a certain degree of *one* particular key. This makes their location definite.

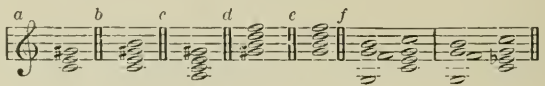
A.—The AUGMENTED TRIAD is found *only* upon the III'. degree of a minor scale (*a*). As *altered chord* it is, however, often found upon the I., IV., and V. degree of a major scale (see **140**).

B.—The AUGMENTED TRIAD with a *major seventh* is found *only* upon the III'. degree of a minor scale, *b* (see **141**—**N. B.**).

C.—The MINOR TRIAD with a *major seventh* is found *only* upon the I. degree of a minor scale, *c* (see **116**—Remark).

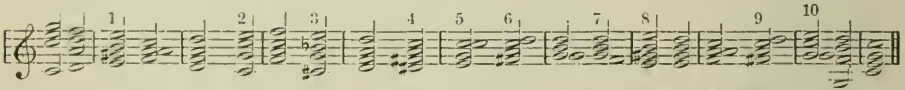
D.—The DIMINISHED TRIAD with a *diminished seventh* (diminished sept-chord) is found *only* upon the VII°. degree of a minor scale, *d*. It is, however, often employed in the major scale as a *passing* or *accidental chord-formation* (**167**—**B**).

E.—The MAJOR TRIAD with a *minor seventh* (dominant sept-chord) is found only upon the V. degree of a scale, *c*. Its *resolution*, however, decides whether it belongs in a major or a minor scale, at *f*. (See **94**—**N. B.**)



a: III'. a: III♭7. a: I7. a: °VII°7. C: V7. C: V7. I. c: V7. I.

148. **Connection of Chords of Different Keys—Modulation.**—In all figured Bass exercises thus far given, we have connected chords *belonging to the key* in which the example was begun. As some chords (triads and sept-chords, **146**—A, B,) may be found in different keys, we may consequently connect those chords with chords belonging to the key in which they may be found, thus:



C: I. II. F: I. VI. V. I. (d: °VII°7. I.) (e: °VII°7. VI.) (C: V. —7. a: V. —7. VI. (G: V7.) C: I. V7. I.
(or a: IV. V. VI. IV.) or (C: I. IV.) (or C: I.)
(or G: IV. V7. I.)

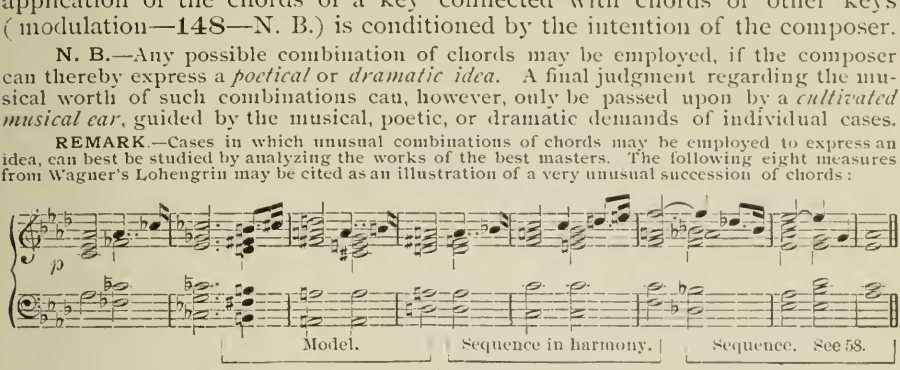
N. B.—Whenever a chord is employed which belongs to some other key, and not to the key in which a composition (or exercise) is written, we then establish the tonality of another key (see **32**, **66**—**N. B.**, **97**, and **118**—**N. B.**). This is called MODULATION. If we but temporarily establish a new key (with a few chords, as in example above), we consider it then an IMPERFECT MODULATION; if the new key is, however, definitely established for same length of time, it is then a PERFECT MODULATION, which will be more fully explained in Chapter XIV.

REMARK.—The foregoing example begins in C major and ends in C major. The F major triad at 1 does not belong to C major; it must consequently have a relation to some other key, namely, *a* minor. We remain in the key of *a* minor until we employ the C major triad, which is not found in the key of *a* minor, at 2; the *succession of chords*, however, establishes the key of F major. At 3, the natural resolution of the *diminished sept-chord* places us in *d* minor. At 4, another *diminished sept-chord*, if naturally resolved (**117**), would place us in the key of *e* minor, but its irregular resolution (see **147**—**D**) results into the C major triad, at 5. This triad may be the tonic triad (I. degree) of the original key (C major); it may be found in *e* minor (VI. degree); but the *following chords* (dominant sept-chord especially, at 6) establish the key of G major (see **147**—**E**). At 7, the dominant sept-chord brings us back to the key of C major; but its *deceptive resolution* (**126**—**N. B.**) places us again in *a* minor, at 8. At 9, the *deceptive resolution* of the dominant sept-chord of G major brings us back to the original key, C major, by means of the 4-6 cadence, at 10. (**146**—**Remark.**)

149. Application of Chords of Different Keys. — The practical application of the chords of a key connected with chords of other keys (modulation—148—N. B.) is conditioned by the intention of the composer.

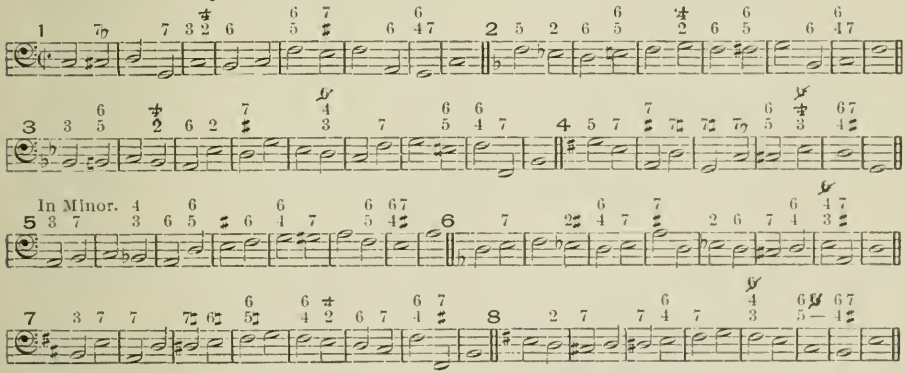
N. B.—Any possible combination of chords may be employed, if the composer can thereby express a *poetical* or *dramatic idea*. A final judgment regarding the musical worth of such combinations can, however, only be passed upon by a *cultivated musical ear*, guided by the musical, poetic, or dramatic demands of individual cases.

REMARK.—Cases in which unusual combinations of chords may be employed to express an idea, can best be studied by analyzing the works of the best masters. The following eight measures from Wagner's Lohengrin may be cited as an illustration of a very unusual succession of chords:



"While the wood-wind instruments softly breathe this passage, Elsa steps forward in tender grief, modestly, with bowed head; a single look of her dreamy, ecstatic gaze explains to us what lives within her soul—the vision of her delivering knight." Such is the scenic situation which Wagner delineates with wonderful tenderness in the above. The unusual succession of harmonies are entirely lost sight of in the truthful expression of sentiment.

The student is to be warned against the use of unusual chord-connections. The larger number of the young composers of the present day aim at startling effects; they expect to realize these by an exaggerated use of unresolved discords, which are neither gratifying to the musical sense nor do they satisfactorily express musical thoughts. Wagner's wise maxim, "never to leave a key unless what you wish to express can not be expressed in this key," should be faithfully followed by all young composers.

EXERCISE LVII.—Work out the given Bass in open position (62), and indicate the passing modulation, as in example in 148

QUESTIONS TO CHAPTER X.

142—**139.** What is an *altered chord?* 143—**140.** How is the augmented triad employed? 144—**141.** In which chords is the *augmented fifth* generally employed? 145—**140.** How should the augmented fifth resolve? 146—**142.** Which original triad, when altered, becomes a *double diminished triad?* How is it altered? and what intervals does it contain? 147—**142.** Upon which degree of the scale, and in which scale, is the double diminished triad formed? 148—**142.** Which inversion of the double diminished triad is employed? 149—**142.** How is the first inversion of the double diminished triad termed? how does the *augmented sixth* resolve? and how the Bass tone? 150—**142.** Which tone is doubled in the augmented six chord? 151—**142.** Into which triad does the augmented triad resolve? 152—**143.** How is the augmented three-four-six chord formed? what chord? on which degree? in which scale? and which inversion? 153—**143.** Into which chord does the augmented three-four-six chord resolve? 154—**144.** How is the augmented five-six chord formed? what chord? on which degree? in which scale? and which inversion? 155—**144.** Into what chord does the augmented five-six chord resolve and why? 156—**145.** Upon which degrees of the major and minor scale is a *major* triad, a *minor* triad, and a *diminished* triad found? 157—**146.** Upon which degree of the major and minor scale do we find a major triad with a major seventh? a minor triad with a minor seventh? 158—**147.** Upon which degree of the major and minor scale do we find the dominant sept-chord? and which degree the diminished sept-chord?

Part II.—Tones Foreign to the Harmony.

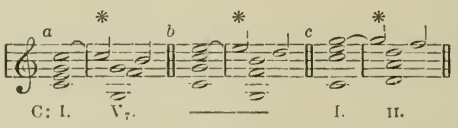
Chapter XI.

ACCIDENTAL TONE-COMBINATIONS.

150. **Suspensions.**—The combination of tones thus far treated of, either form TRIADS (containing the intervals 1-3-5—**25**) or their inversions (**80**); SEPT-CHORDS (containing the intervals 1-3-5-7—**92**) or their inversions (**100**); or CHORDS OF THE NINTH (containing the intervals 1-3-5-7-9—**133**) and some inversions (**137**).

Some of these chords contain consonant intervals *only* (*major* and *minor triads*—**51**), while others contain ONE: (*diminished*—**50** and *augmented* triad—**70**); TWO: (*dominant sept-chord*—**95**, and sept-chord upon the VII°. degree of the major scale and II°. of the minor scale—**115**—B); and THREE dissonant intervals (*diminished sept-chord*—**117**).

These *dissonant intervals*, however, are component parts of the different harmonies: TRIADS, SEPT-CHORDS, and CHORDS OF THE NINTH.

In a succession of chords it may occur that a tone of a chord is held over into the following chord, thus forming a *dissonant interval* which does *not* belong to the chord with which it is sounded; e. g.:

At *a*, the C (*root*) of the tonic triad in the Soprano ought to descend at the beginning of the following measure to the B of the dominant sept-chord, but is instead prolonged, held over (suspended) *above the* B, thus forming a *dissonant interval* which does not belong to the chord. The *dissonant interval* (the tone held over, or *suspended* above the tone of the chord) finally descends to the tone it ought to have descended to.

At *b*, the E (*third*) of the tonic triad in the Soprano is held over (SUSPENDED) above the D: *fifth* of the dominant sept-chord. This *dissonant interval* likewise descends (resolves) to the tone above which it is *suspended*.

At *c*, the G (*fifth*) of the tonic triad in the Soprano is prolonged and forms a *suspension* above the F of the triad upon the II. degree. This *dissonant interval* (like those at *a* and *b*) resolves *one degree down* to the tone of the following chord above which it occurs.

N. B.—Such *dissonant tones* as occur at *a*, *b*, and *c* are *foreign to the harmony* with which they are sounded, and as they are held over from a tone of the preceding chord and finally resolve (descend *one diatonic degree*) to the tone of the following chord above which they are *suspended*, they are called SUSPENSIONS.

A SUSPENSION IS A TONE FOREIGN TO THE HARMONY WHICH HAS BEEN PROLONGED FROM ONE OF THE TONES OF THE PRECEDING CHORD.

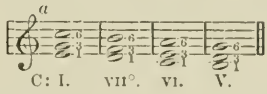
151. Preparation and Resolution of a Suspension.—The suspensions belong (like the seventh in the collateral sept-chords—109) to that class of dissonant intervals which besides *resolution* (23—N. B.), also require *preparation.*

Rule VIII.—A suspension must be PREPARED and RESOLVE *one diatonic degree downward.*

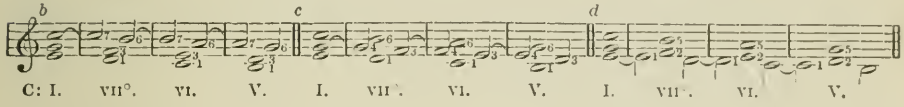
A.—A suspension may be prepared by any tone of a *triad* or *sept-chord* (at *b*, *c*, *d*,). The PREPARATION must—in order to lessen the harshness of the dissonant tone—be as long as the suspension; it may (like the seventh in the collateral sept-chords—109—B) be longer, but not shorter.

B.—A SUSPENSION may be employed above any tone of a *triad* or *sept-chord.* It generally falls upon the accented part of the measure (thesis), while the *preparation* occurs upon the unaccented part (arsis). See 109—C.

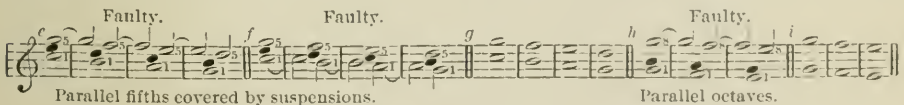
N. B.—A SUSPENSION (150—N. B.) may be employed in *any of the four voices* wherever in the *resolution* of a chord a voice *moves one degree downward.*



In this succession of six-chords each of the three voices *moves down one degree;* we can, consequently, employ suspensions in each voice separately, thus:



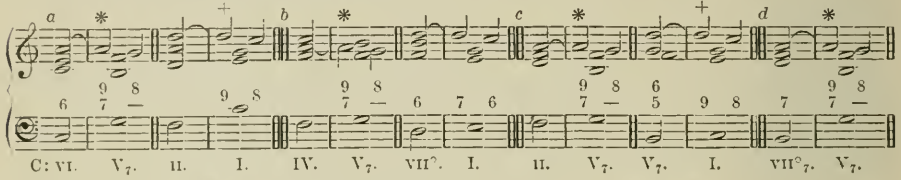
At *b*, the upper voice employs a succession of suspensions prepared by the *Root* of the preceding chord; at *c*, the middle voice employs a succession of suspensions, prepared by the *fifth* of the preceding chord; and at *d*, the lower voice employs a succession of suspensions, prepared by the *third* of the preceding chord. The *preparation* is in all cases as long as the suspension, with the exception of the first suspension at *b*, *c*, and *d*, where the preparation is longer. The *suspensions* all occur upon the accented part of the measure (thesis), and the *preparation* upon the unaccented part (arsis). See B.

MAXIM.—SUSPENSIONS DO NOT REMOVE PARALLEL FIFTHS AND OCTAVES (42). That is: *parallel fifths* and *octaves* are not allowable even if one of the two voices moving with another in *parallel fifths* or *octaves* holds a tone longer, as a suspension, as at *e*, *f*, and *h*. Although the *resolution* of the suspension at *e*, *f*, and *h* occurs on the second half of the measure, while the other voice forming the fifth descends in the first half, the ear, nevertheless, perceives the *parallel fifths* which result if there were no suspensions, as at *g* and *i*. Such progressions of *fifths* and *octaves* must consequently be avoided

REMARK.—The suspensions at *e* and *e* are not proper suspensions, as the tones forming the suspensions are not *dissonant tones* tones *foreign* to the harmony—150 N. B.), but are tones belonging to the chord. At *e*, the suspended tones form *four-six chords* of G major, F major, and *e* minor. At *e*, the suspended tones form *six-chords* of G major, F major, and *e* minor. These *suspended tones* are consequently not real suspensions, but have only the *character of suspensions*, as the other tones of the chord are held while the suspended tones descend.

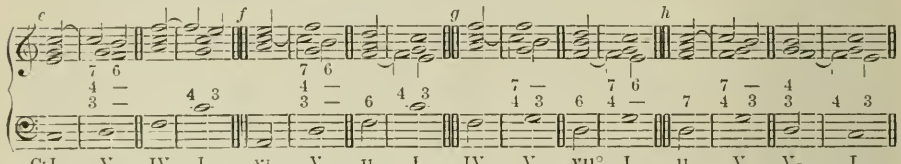
152.—**Suspension Above the Root, Third, Fifth and Seventh.**—A suspension may be employed above any tone of a *triad* or *sept-chord* (**151**—B). A suspension may be prepared by any tone of a *triad* or *sept-chord* (**151**—A).

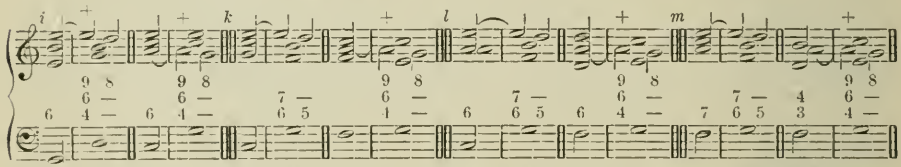
N. B.—Three points must be observed in the application of the suspension, viz.: the PREPARATION, the SUSPENSION itself (*where* and *above which tone* it occurs), and the RESOLUTION.

A.—SUSPENSION ABOVE THE ROOT, prepared by the *fundamental* (*a*), the *third* (*b*), the *fifth* (*c*), and the *seventh* (*d*).

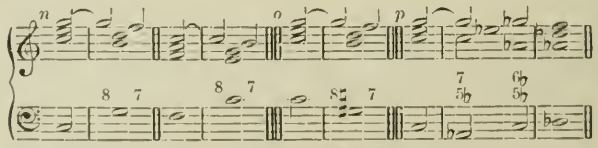


B.—SUSPENSION ABOVE THE THIRD, prepared by the *fundamental* (*e*), the *third* (*f*), the *fifth* (*g*), and the *seventh* (*h*).



C.—SUSPENSION ABOVE THE FIFTH, prepared by the *fundamental* (*i*), the *third* (*k*), the *fifth* (*l*), and the *seventh* (*m*).

D.—A SUSPENSION ABOVE THE SEVENTH is impossible among the sept-chords of a key; as the *suspended tone* will in all cases be the perfect octave (*n*), which is not a dissonant tone, nor is it foreign to the harmony (**150**—N. B.).

A suspension above the seventh of the *diminished sept-chord* (*o*), and also above the seventh of the *dominant sept-chord* (*p*), may occur in MODULATION: above the latter, however, very seldom.



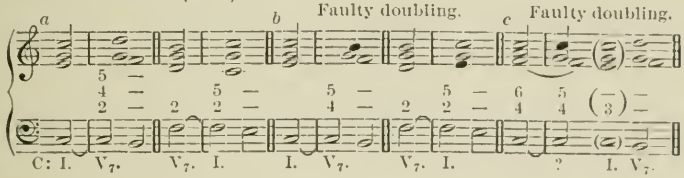
REMARK.—The chords indicated by a + in the examples in A and C, contain the *suspended tone* and the tone *above which the suspension occurs*. This is allowed under certain conditions only (see **153**—Maxim and Remark). The examples marked by a * likewise contain the *suspended tone* and the tone *above which the suspension occurs*; but the suspension in this case forms a *ninth* of the *dominant sept-chord*, which is treated as a real chord-formation (see **135**—Remark). In the above instances, however, the *ninth* has more the character of suspension than of a chord of the ninth (see **138**).

153. Suspension in the Bass—Faulty Doubling. — The Bass is more weighty in tone-power than any of the other upper voices. It thus establishes a firm foundation in a succession of chords (84).

Suspensions may be employed in the Bass, but as the suspended tones (*suspensions*) are tones foreign to the harmony (150—N. B.) the Bass would, by employing them, not only weaken the harmonic foundation, but also, in some instances, make the harmonic formation uncertain (*c*).

MAXIM.—The tone of the chord above which a suspension occurs, and the suspended tone should not be sounded simultaneously (as at *b*), nor should the suspended tone be doubled (as at *c*). Cases of this kind are called FAULTY DOUBLING.

In cases of such *faulty doubling* (which may occasion uncertain chord-formations, as at *c*), the *resolution* of the chord will more definitely explain (establish) its formation and harmonic relation (at *c*).

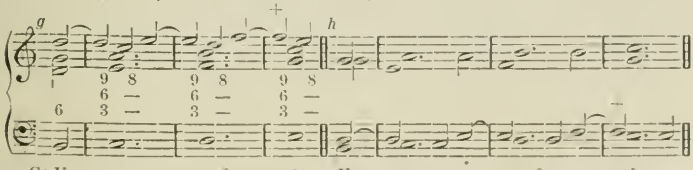


At *a* (first example), the Bass holds a suspension above the *third* of the dominant sept-chord, and second example above the *third* of the tonic triad. At *b*, likewise, but the *third* of the dominant sept-chord first example is doubled in the Soprano and second example in the Tenor, which is faulty. At *c*, the Bass likewise holds a suspension above the *third* of the dominant sept-chord, but as the Soprano doubles the suspended tone C the chord bec omes uncertain, as it may be a suspension in the Tenor above the *third* of the tonic triad or a suspension above the *third* of the dominant sept-chord.

N. B.—THE BASS, on account of its *tone-power*, *may hold the tone of a chord above which a suspension occurs*, as the harmonic foundation would thereby neither be weakened, nor the chord-formation be made uncertain (see 152—Remark).

THE TENOR may likewise hold the tone of chord above which a suspension occurs *if the suspension* OCCURS ABOVE THE ROOT and *is at a distance of a* NINTH *from the* TENOR (as at *d*), not a *second* (as at *e*).

REMARK.—The simultaneous sounding of the suspension and the tone of the chord above which the suspension occurs, is most satisfactory *if such takes place* ABOVE THE ROOT (as at *d* and *f*) or FIFTH (as in 152—C), rarely *above the* THIRD (as at *g*, not as at *h*).



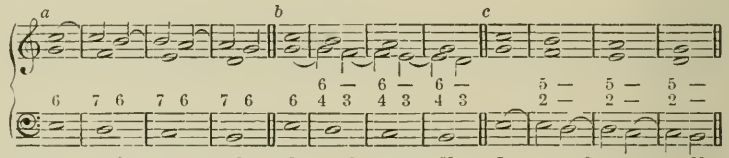
It will be best in all cases where the two tones are sounded simultaneously to keep them at a distance of a *ninth* from each other (as at *d* and *g*, and 152—C). They may be brought closer a distance of a second in the Tenor and Bass (as at *f*); not in the Tenor and Alto (as at *e*), nor in any other two upper voices. CASES WHERE THE SUSPENDED TONE IS *a major second* ABOVE THE TONE OF THE CHORD (as at *d* and *f*) ARE MILDER THAN THOSE FORMING *minor seconds* (as at *g*, *h*, at +). The tone-power of the Bass firmly establishes the harmony, and the low register (low pitch) of the Tenor tends to lessen the harshness occasioned by the proximity of the suspension and chord-tone (at *f*). The proximity of the two tones at *f* is satisfactory (being *above the* ROOT), while at *h* their position is unsatisfactory, occurring *above the* THIRD.

154. Figured Bass in Suspensions.—Suspensions are not in all cases definitely indicated by the figured Bass.

A figure indicating a suspension is generally followed (as the suspension *descends* one diatonic degree—**151**—Rule VIII.) by a figure one number less, as: 9 8, 7 6, 6 5, 4 3, etc.

N. B.—If a suspension occurs in a chord, the SUSPENSION and *the most important interval* of the chord must be indicated by the figures over the Bass. In a triad (if inverted) this would be the *fundamental*, as at *a*, *b*, *c*; in a sept-chord (if inverted) it would be the *fundamental* and *seventh*, as in **152**, at A, B, C.

A.—The examples of *suspensions* in TRIADS in three voices (succession of six-chords) in **151**—*b*, *c*, *d*, would be figured as follows:



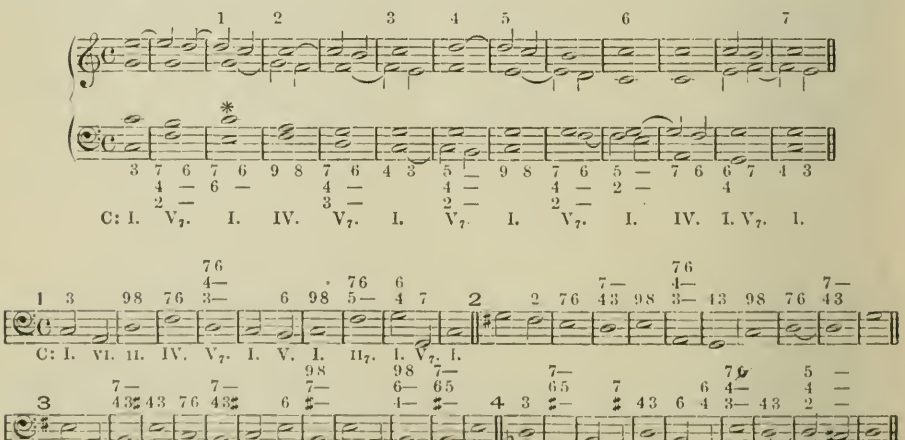
1.—The figures 7 6, at *a*, suggest a *sept-chord* upon the first half of the measure and a six-chord upon the second half; but as the 7 descends to the 6, the 7 is consequently a *suspension*, not a *sept-chord*. The SIX-CHORD is thus the real chord, and the harmony must be marked, as at *a*:—I., VII°., VI., V., and not: I., II7., VII°., I7., VI., VII°7., V. This is also the case at *b*, the 4-6 is a suspension and the SIX-CHORD is the real chord (see **151**—Remark).

2.—If suspensions occur in the Bass, as at *c*, the figures (intervals) are indicated from the first note (the suspended note), not from the note of the chord above which the suspension occurs. At *c*, the E in the Bass forms the suspension above the third (D) of the chord; the other tones of the chord thus form the intervals 2 (which is the *fifth*) and 5 (which is the *root*), while the suspension descends to the *third* of the chord, the other tones being held: 2— 5—. See 4 and 6, example below.

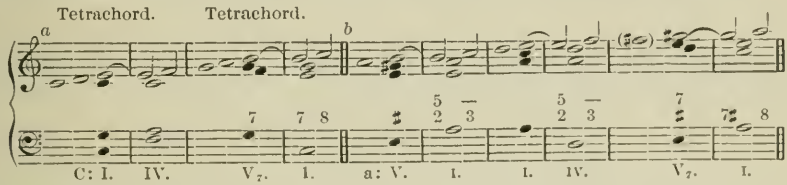
3.—A suspension above the *root* of a triad (in its fundamental position) is marked 9 8 (see 2 and 5 of example below), and a suspension above the *third* is marked simply 4 3 (see 3 and 7 of example below).

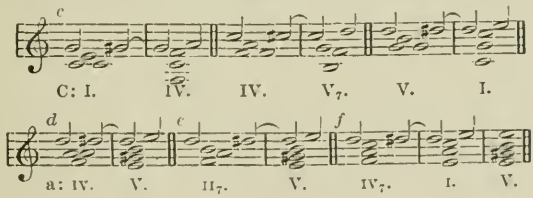
B.—Examples of figured Bass, with *suspensions* above the tones of a SEPT-CHORD (fundamental or inverted positions) are found in **152**—A, B, C.

EXERCISE LVIII.—Work out the figured Bass below in open position, as in following example. See **151**—Rule VIII. At 1, see **153**—Remark; at 4 and 6, see **154**—A, 2.

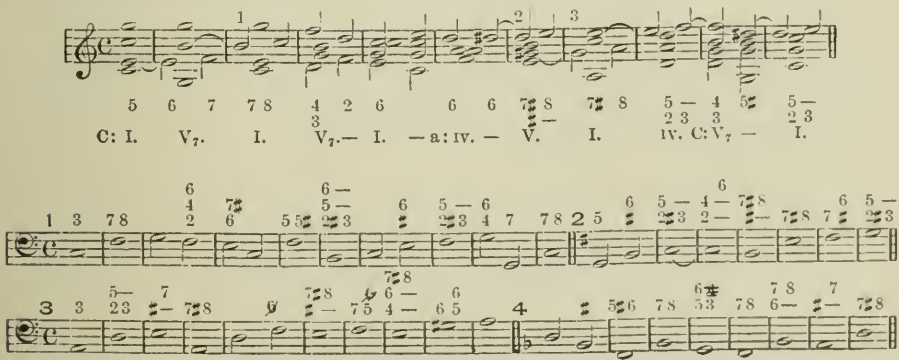


155. **Suspensions from Below.** — Rule VIII., in **151**, requires of a suspension that it be *prepared* and *resolve one diatonic degree* DOWNWARD. In certain cases suspensions may be employed below a tone of a chord which *resolve one degree* UPWARD.

N. B.—In the major scale are found TWO *diatonic half-steps*—between the third and fourth and seventh and eighth degrees (4). These half-steps constitute the third and fourth tone of the *tetrachords* of a major scale (see 4—Remark), which have the character of leading tones (5—G), whose natural *melodic tendency* is *upward*, one diatonic half-step. If these tones (the *third* and *seventh* of the major scale) are employed as suspensions from *below*, they will *naturally* resolve one diatonic half-step upward (as at *a*). In the *harmonic minor scale* are contained THREE *diatonic half-steps* which are likewise employed as suspensions from below (as at *b*).

MAXIM.—Suspensions from below are most satisfactory wherever the suspended tone has a *natural inclination* to ascend *one diatonic half-step*. Such *natural inclination* for progression UPWARD is found in the DIATONIC HALF-STEPS of the major (at *a*), and minor scale (at *b*), and in the *augmented interval* of the ALTERED CHORDS, namely: in the *augmented fifth* of the AUGMENTED TRIAD, at *c* (140, 141,); in the *augmented sixth* of the AUGMENTED SIX-CHORD, at *d* (142), the AUGMENTED THREE-FOUR-SIX CHORD, at *e* (143), and the AUGMENTED FIVE-SIX CHORD, at *f* (144).

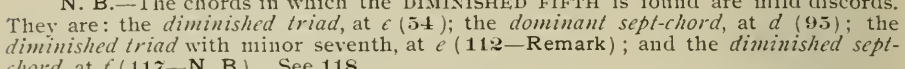


EXERCISE LIX.—The following exercises in *suspensions from below* should be worked out in four-part harmony in open position. The example below will demonstrate the manner of Bass figuring and the marking of the degrees. At 1, 2, 3, see **153**—N. B.

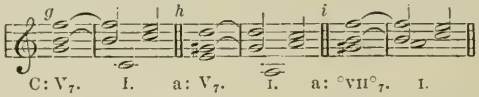


156. **Double and Triple Suspensions.**—The *diminished fifth* and its inversion, the *augmented fourth*, are the mildest dissonant intervals, and at the same time the most satisfactory in their resolution; as the *diminished fifth* resolves into the *major* or *minor third* (*a*), and the *augmented fourth* into the *major* or *minor sixth* (*b*). See **72**—B.

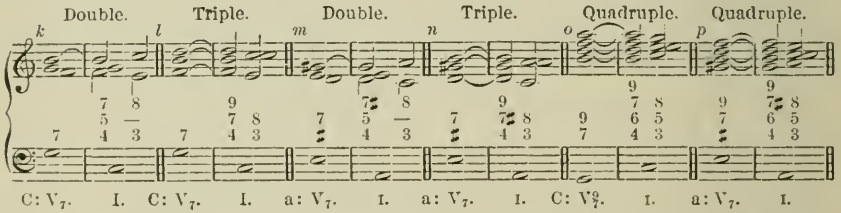
N. B.—The chords in which the DIMINISHED FIFTH is found are mild discords. They are: the *diminished triad*, at *c* (**54**); the *dominant sept-chord*, at *d* (**95**); the *diminished triad* with minor seventh, at *e* (**112**—Remark); and the *diminished sept-chord*, at *f* (**117**—N. B.). See **118**.



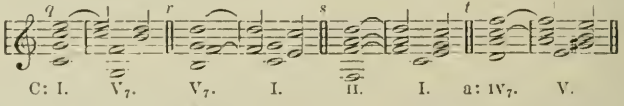
A.—As the two tones constituting the *diminished fifth* ascend and descend *one diatonic degree* in their resolution, they may therefore be employed as DOUBLE SUSPENSIONS,—one from above and one from below, thus:



B.—All chords in which the *diminished fifth* occurs require (like the *diminished fifth*) a definite resolution (see **Remark.**) The dissonant intervals of the chords mentioned at **N. B.**, or the whole chord may be employed as suspensions from above and below, thereby forming suspensions in THREE and FOUR PARTS, thus:

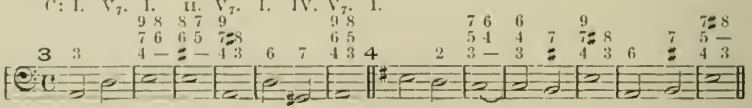


C.—*Double* and *triple suspensions* from ABOVE may likewise occur where TWO voices descend in *thirds* (*q*), *sixths* (*r*), or THREE voices descend in *six-chords* (*s*, *t*,), thus:



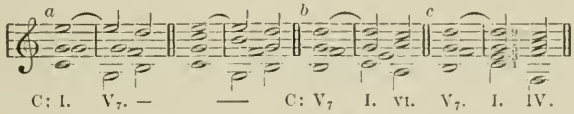
REMARK.—The *altered chords* (**140** to **144**) likewise contain dissonant intervals which may be employed as *double*, *triple*, and *quadruple suspensions* from above and below, but their application as such is not as satisfactory as those containing the *diminished fifth*. Some of the examples above especially those from *k* to *p*) may be explained differently **160**—Remark).

EXERCISE LX.—Work out this given Bass in open position, and carefully observe the rules (VIII.—**151**, and **153**—N. B. in the application of the *double* and *triple* suspensions. Mark the degrees as in example **1**.



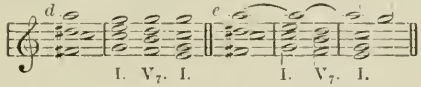
157. **Suspensions Retained Through Several Chords.** — In the *preparation* and *resolution* of a suspension (152—N. B.) we have thus far employed two chords: the chord forming the *preparation*, and the chord in which the *suspension* occurred (resolved). The voices not holding the suspension may, however, move with more freedom, employing THREE or MORE chords while a suspension is held.

N. B.—A suspension must always resolve to the tone above (or below—155) which it occurs (150—N. B.). While the suspension thus resolves the Bass and other voices may move to another tone of the same chord (*a*), or another chord (*b*).



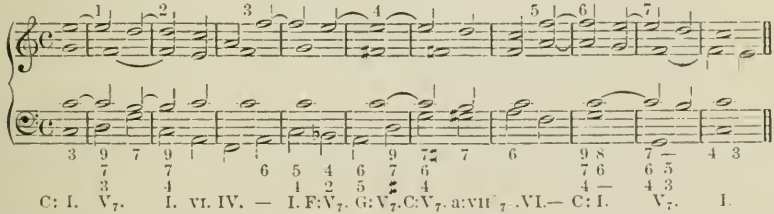
At *a* the suspension occurs above the *fifth* (D) of the dominant sept-chord to which it resolves; but the Bass at the same time moves from the fundamental to the five-six chord. In the second example, at *a*, the Bass and the Alto proceed to another interval of the same chord. At *b* and *c* the suspension occurs above the root (C) of the tonic triad; it resolves to C, but the latter is no more the *root* of the tonic triad, but becomes *third* of the *a* minor triad, at *b*, and at *c*, *fifth* of the F major triad.

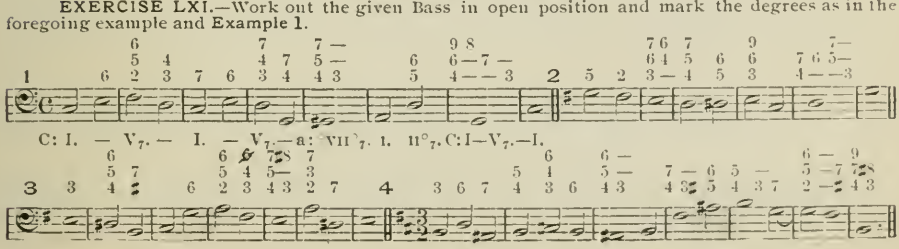
MAXIM.—A suspension may be continued through SEVERAL CHORDS *if the tone above which the suspension occurs is one of the tones* (interval) *of the following chords*, e. g.:



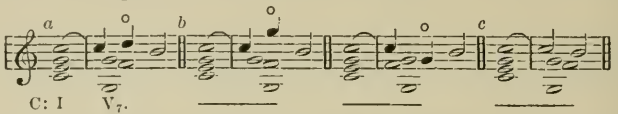
At *d* the G in the upper voice belongs to the three chords; at *e* the Soprano holds a suspension above this tone (the G), while the other voices move to the other chords. The suspension, however, finally resolves to the tone above which it is held.

REMARK.—The examples of suspensions at *b* and *c* have the appearance of chords of the *ninth*. If such accidental chord-formations were treated as chords of the ninth, each particular chord of the major (107) and minor scale (115), if a *ninth* were added, would demand a special treatment, as to inversions, omission, etc., which would make the explanation regarding the use of such chords extremely difficult. The proper chord of the ninth is the *dominant ninth* (133—Remark). Other accidental ninths are harsh dissonant intervals which require (like the suspensions—151—Rule VIII.) *preparation* and *resolution*. They are therefore subject to the same treatment as the *suspensions*, and as such are more easily explained and understood (see 138—Remark). The following example may illustrate this.

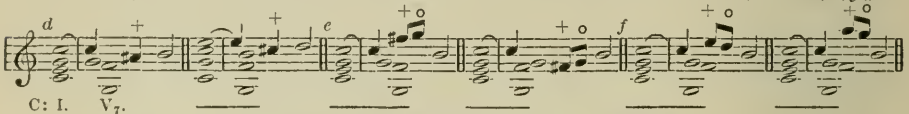
At 1, 6, and 7, see 156—C; at 2, see 156—B. As to the skip of the voices at 3 and 5, see 91—Ex. XXXII. At 4, a suspension is held through several chords. See Maxim.

EXERCISE LXI.—Work out the given Bass in open position and mark the degrees as in the foregoing example and Example 1.

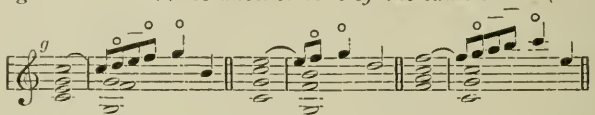


158. Interrupted Resolution of a Suspension. — A suspension *must resolve* (**151—Rule VIII.**); the resolution may, however, be interrupted.

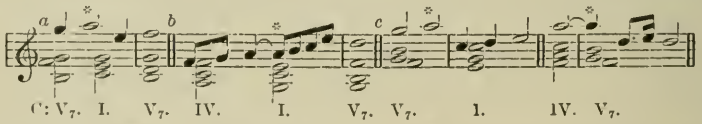
A.—The voice holding the suspension may *move* (*a*) or *skip* (*b*) into another tone (interval) of the same chord in which the suspension is held before resolving into the tone above which the suspension occurs, thus:

At *a* and *b* the suspension occurs above the B—*third* of the dominant sept-chord. At *a* the resolution is *interrupted* by inserting the D—*fifth* of the sept-chord, and at *b*, the G—*root* of the sept-chord between the *suspension* and its *resolution*. The tone above which the suspension occurs (the B) is finally heard, however, so that the ear nevertheless perceives the *suspension* and its regular *resolution*, as at *c*.

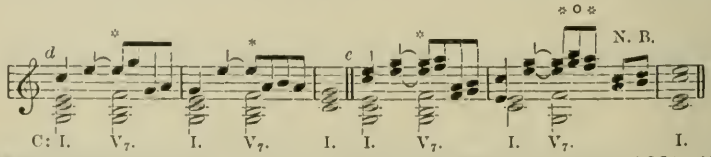
B.—The *resolution* of a suspension may be *interrupted* by one or more tones *foreign to the chord* in which the suspension occurs.

1.—If such tones are *appoggiaturas* (163)—tones *foreign* to the harmony which, when struck, move A DEGREE UP OR DOWN to a tone of the same chord (as at *d*, *e*, *f*,).

2.—If such tones are *passing tones* (161)—tones *foreign* to the harmony, employed in *passing* DIATONICALLY *to another tone of the same chord* (as at *g*).

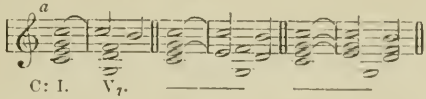


REMARK.—The o above a note denotes a *chord-tone*, a + an *appoggiatura*, and a — a *passing tone* (see **163, 161**).

159. Unresolved Suspensions.—Cases may occur in which a tone of a *melody* appears as a suspension (at *), but is not resolved as such, thus:

Such cases of *unresolved suspensions* in a *melody* occur principally above the FIFTH of the *tonic triad* (as at *a*, *b*,), or show themselves to be the *unresolved* NINTH of the *dominant ninth* (as at *c*), which *if it* (the *ninth*) *appears* IN MELODY above the ROOT and THIRD of the chord (see **134—Remark**) is almost as flexible regarding its *introduction* and *resolution* as the *seventh* in the dominant sept-chord (**118—A**).

Such interrupted suspension *in the melody* may likewise be employed above the *fifth* of the dominant triad or sept-chord, e. g.:

REMARK.—Examples as at *e* may be explained as *delayed progressions* (**160**). The case at N. B. will be defined in **166—C.**

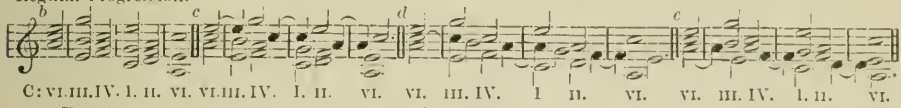
160. Anticipated and Delayed Progressions.—Suspensions belong to the delayed progressions (150—N. B.), in *one* or *more* voices; thus:



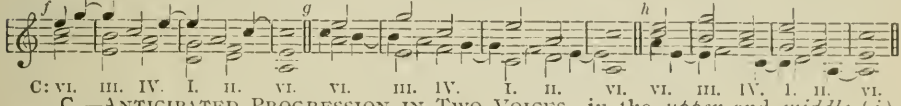
N. B.—One or more voices may *delay* or *anticipate* an expected progression, thereby forming tones foreign to the harmony. The progression of one of the three voices at *b*, is *delayed* at *c*, *d*, and *e*, and *anticipated* at *f*, *g*, and *h* (see Remark).

A.—Delayed Progressions—in the *upper* (*c*), *middle* (*d*), and *lower voice* (*e*).

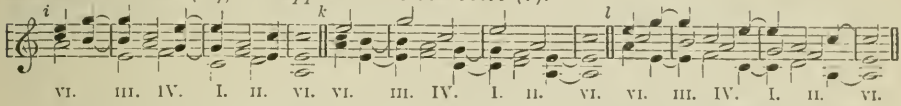
Regular Progression.



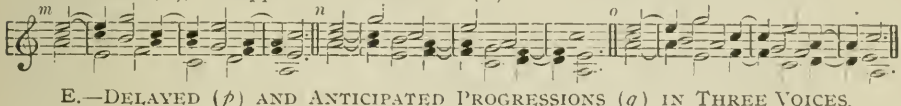
B.—Anticipated Progressions—in the *upper* (*f*), *middle* (*g*), and *lower voice* (*h*).

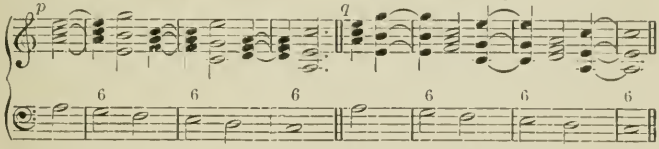


C.—Anticipated Progression in Two Voices—in the *upper* and *middle* (*i*), *middle* and *lower* (*k*), and *upper* and *lower voice* (*l*).



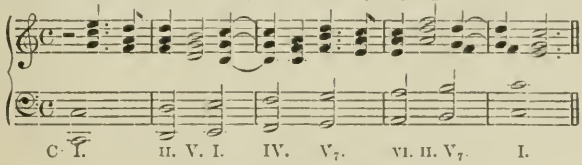
D.—Delayed Progression in Two Voices—in the *upper* and *middle* (*m*), *middle* and *lower* (*n*), and *upper* and *lower voice* (*o*).



E.—Delayed (*p*) and Anticipated Progressions (*q*) in Three Voices.

REMARK.—There is no difference between the example of *delayed progression* at *d* and real *suspensions*, as the middle voice descends by degrees (151—N. B.). The other examples, however, are altogether different from the suspensions, as the voices move by skips, which would preclude the use of suspensions, as these must resolve by degrees (151—Rule VIII.).

The examples of *double* and *triple suspensions* in 156 at *g*, *h*, *i*, *k*, *l*, *m*, *n*, *o*, and *p*, may be considered as belonging to the *anticipated progressions*—the Bass anticipating the *tonic triad*.

EXERCISE LXII.—Point out the *anticipated* and *delayed progressions* in the following example.



QUESTIONS TO CHAPTER XI.

159—**150.** What is a suspension? 160—**151.** What is required of a suspension? 161—**156.** Which dissonant interval may be employed in forming *double suspensions* (from below and above)?

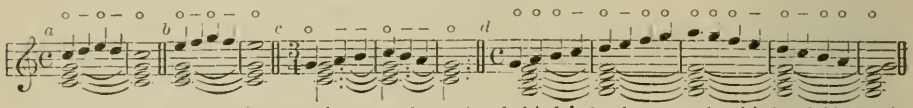
Chapter XII.

PASSING TONES—ALTERNATING TONES—APPOGGIATURAS.

161. **Passing Tones — Passing Dissonant.** — A passing tone is (like the suspension—150) a tone *foreign* to the harmony.

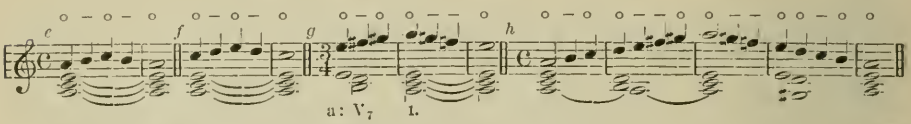
N. B.—A PASSING TONE is a tone foreign to the harmony which is employed upon the unaccented part of the measure in *passing diatonically* (4) from one tone of a chord to another. (See Remark).

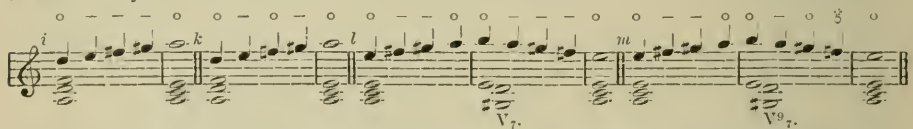
A.—DIATONIC PASSING TONES OF THE MAJOR SCALE.

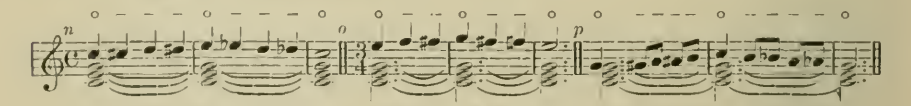


At *a* the *diatonic passing tone*, between the *root* and *third*, is D; between the *third* and *fifth* at *b*) F; at *c*, from the *fifth* (G to the *octave* (C —being a fourth—we require *two diatonic passing tones:* A and B. At *d* the A appears as *ninth* (136—B); it is therefore marked as a tone belonging to the chord of the dominant ninth.

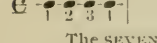
The tones belonging to the chord are indicated by an o, the passing tones by a —.

B.—DIATONIC PASSING TONES OF THE MINOR SCALE.

WHETHER THE SIXTH AND SEVENTH OF THE MINOR SCALE SHOULD BE *raised* OR *lowered* IN EMPLOYING PASSING TONES DEPENDS UPON THE ACCOMPANYING HARMONY.

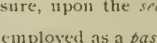
At *g* and *h* the diatonic tones of the MELODIC MINOR SCALE (64—C) are employed as *passing tones* (see 123). These passing tones would be objectionable with the harmony at *i*; the *sixth* lowered and the *seventh* raised (*harmonic* minor scale—64—B would be better, as at *k*. The descending *melodic minor* scale at *l*, is likewise objectionable, with the accompanying harmony (dominant sept-chord; the *seventh* raised and the *sixth* lowered, as at *m* (*harmonic* minor scale), would conform the *passing tones* to the harmony.

In example *m*, at *, the F appears as *ninth* of the dominant chord of the ninth; as such it constitutes a tone of the chord and is consequently more acceptable (in spite of the *augmented second*—73) than if F♯ were employed (as in 136—Remark—at *h*), which would constitute the *major ninth* of the major scale.

C.—CHROMATIC PASSING TONES (see 6—N. B.).

At *n*, between the *root* (C) and the MAJOR *third* (E), there are *three chromatic passing tones;* at *o*, between the *third* (E) and the *fifth* (G), being a MINOR *third*, there are *two chromatic passing tones*. From the *fifth* (G) to the octave (C), being a PERFECT *fourth*, we employ *four chromatic passing tones*.

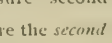
REMARK.—PASSING TONES OCCUR UPON THE *unaccented part of the measure* ONLY (see 163—Maxim). In 4-4 time the unaccented parts of the measure are found upon the *second* and *fourth* quarter



or, if only *two half notes* occur in the measure, upon the *second half:*



The SEVENTH of the *collateral sept-chords* is frequently employed as a *passing tone* upon the unaccented part of the measure—second-half— see 122—N. B. and 123—N. B.). In 3-4 time the unaccented parts of the measure are the *second* and *third* quarters:



The first tone of each measure is always the *accented part.*

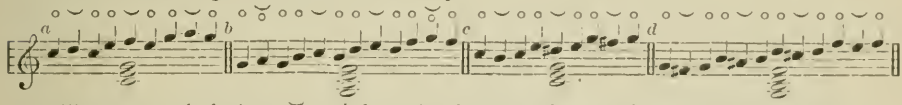
162. Alternating Tones—Alternating Dissonant.—The *alternating tone* is like the *passing tone* (161), foreign to the harmony.

N. B.—An *alternating tone* (or changing tone) is a tone foreign to the harmony which occurs upon the *unaccented part* of the measure, resulting by moving from a tone of a chord to the tone a degree *above* or *below* and back to the chord-tone, thereby *alternating* with a chord-tone. (See Remark.)

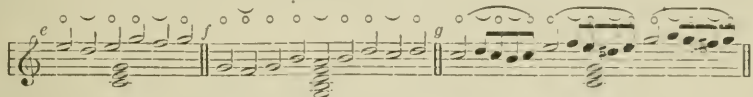
A.—The ALTERNATING TONE ABOVE *a chord-tone* is always a *diatonic tone* (*half* or *whole step*), as at *a*, *b*.

B.—The ALTERNATING TONE BELOW *a chord-tone* is most satisfactory if it forms a *diatonic half-step* (9), as at *c*, *d*.

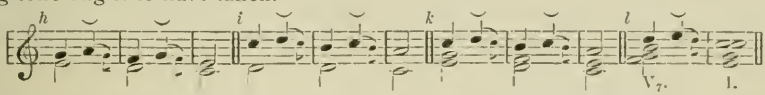
The alternating tones are indicated by a ⌣.



The notes marked with a ⌣, at *b*, have the character of alternating tones, but are really tones belonging to the chord. See 161—A. The alternating tones *below* may be like those *above*, at A) *diatonic tones*, as at *e*, *f*, but these are not as satisfactory as those a *diatonic half-step below*, as at *c*, *d*. Alternating tones *above* and *below* in succession, as at *g*, give the group of notes the character of the TURN.

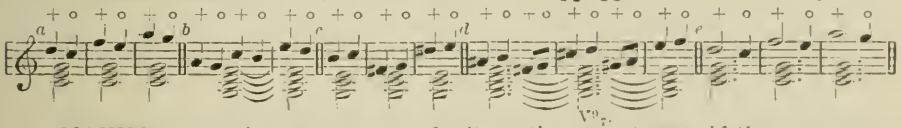


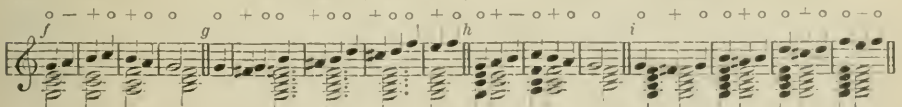
C.—INTERRUPTED PROGRESSIONS of the *alternating tones* often occur in a succession of *thirds* (*h*), *sixths* (*i*), or *six-chords* (*k*), as also frequently in the resolution of the *dominant sept-chord* (*l*). The small notes point out the progression the alternating tone ought to have taken.



REMARK.—The *alternating tone* occurs like the *passing tone* (161—Remark) upon the *unaccented part* of the measure ONLY, while the harmony is *sustained*. If it occurs upon the accented part of the measure, or is struck *with the harmony* upon the *unaccented part*, it is then no longer an alternating tone (see 163—Maxim.)

163. Appoggiaturas — Leaning Dissonant. — The appoggiatura (from the Italian *appoggiare*—to *lean*) is almost identical with the *alternating tone* (162—Remark), as it always, like the latter, occurs *one degree above* or *below* a chord-tone, upon the *accented part* of the measure however, (*a*, *b*, *c*, *d*,) or struck with the chord upon the *unaccented part* (*h*, *i*,) which makes it more dissonant.

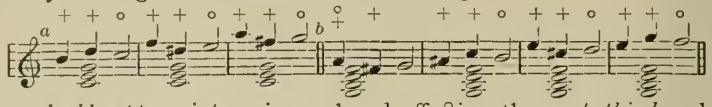
N. B.—An *appoggiatura* is a tone foreign to the harmony appearing upon the accented part of the measure *one degree above* (*a*, *b*,) or *below* (*c*, *d*,) a tone of a chord to which it *must resolve* (see 162—A, B,). The appoggiatura is marked by a +.

MAXIM.—A *passing tone* (161) and *alternating tone* (162), *if they occur upon the* ACCENTED PART OF A MEASURE (as at *f*, *g*,), or are STRUCK *with the chord upon the* UNACCENTED PART OF A MEASURE (as at *h*, *i*,), become APPOGGIATURAS.



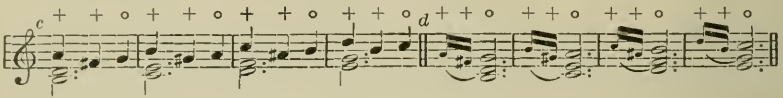
REMARK.—The *appoggiatura* may be introduced by *skips*, as at *a*, *b*, *c*, *d*, or by moving into it by *degrees*, as at *f*, *g*, *h*; it may likewise be introduced by *skips* upon the unaccented part of the measure, as at *d*. Its peculiar LEANING *tendency* makes its introduction—notwithstanding its dissonant character—in all cases pliant and effective in melody. The appoggiatura may even be longer than the tone *above* or *below* which it occurs, as at *e*.

164. Double Appoggiaturas.—The appoggiatura resolves *directly* to the tone *above* or *below* which it occurs (163—N. B.).

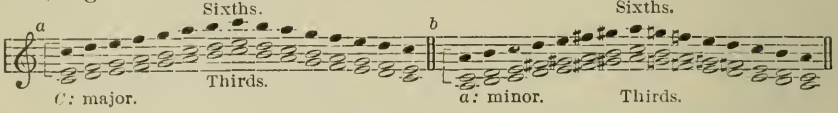
N. B.—Both the appoggiaturas (*above* and *below*) may be employed in one voice upon the accented part of the measure before resolving into the tone which they effect, thereby forming a DOUBLE APPOGGIATURA; e. g.:

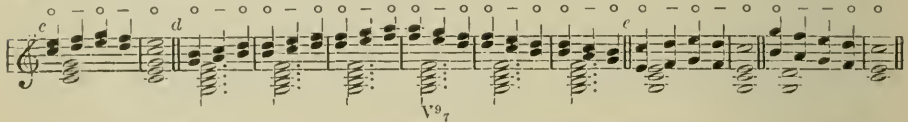
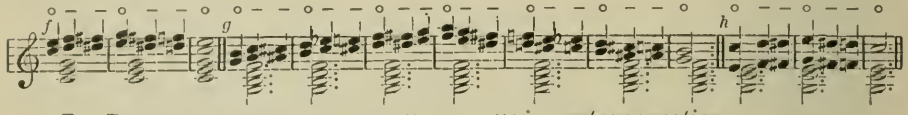


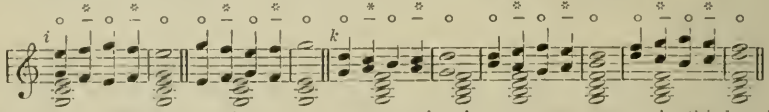
At *a*, a *double appoggiatura* is employed effecting the *root*, *third*, and *fifth* of a triad, and at *b*, the *root*, *third*, *fifth*, and *seventh* of the dominant sept-chord. At *c*, a *double appoggiatura* is employed effecting the *sixth* (root of the chord) in a succession of six-chords. At *d* likewise, but the appoggiaturas take the character of GRACE NOTES; in this manner they are frequently employed.



165. Passing Tones in Two Parts.—Passing tones (161) may be employed in more parts than one.

N. B.—The *thirds* and *sixths* (imperfect consonances—22—B) are the *only* intervals which, in a progression in parallel motion in two parts, give any harmonic satisfaction; e. g.:

A.—DIATONIC PASSING TONES IN TWO PARTS may be employed *if two voices move* in THIRDS in *parallel* motion (as at *c*, *d*,).

B.—DIATONIC PASSING TONES IN TWO PARTS may be employed *if two voices move in* SIXTHS in *parallel* motion (as at *e*).

C.—CHROMATIC PASSING TONES IN TWO PARTS in *parallel* motion—in THIRDS (*f*, *g*,) and SIXTHS (*h*).

D.—DIATONIC PASSING TONES IN TWO PARTS in *contrary motion.*

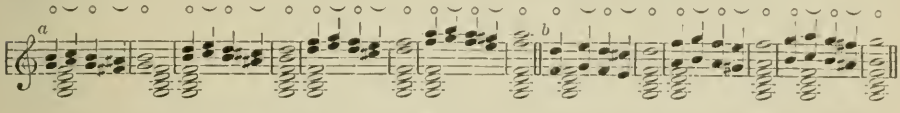


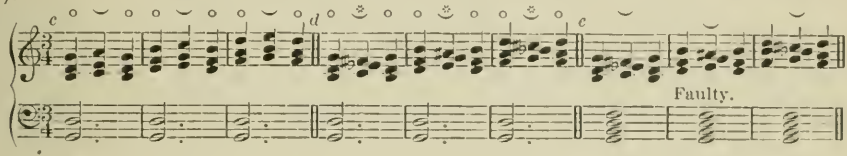
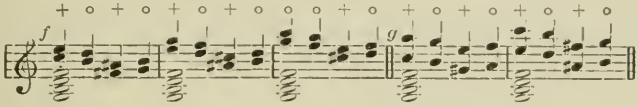
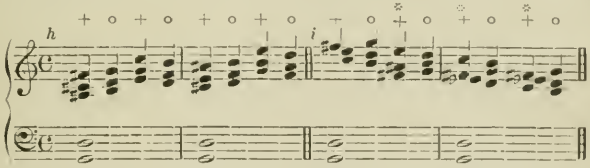
REMARK.—Passing tones in two parts progressing in PARALLEL MOTION in *thirds* and *sixths* (*c* to *h*) are always satisfactory (N. B.), as the two voices move in the same direction, one appearing as companion to the other, establishing a MELODIC PHRASE in *thirds* or *sixths*, thus apparently both striving simultaneously for the same object, namely: the *other tones of the chord.*

The *dissonant tones* constituting the passing tones of the two voices progressing in CONTRARY MOTION at *k*—*, form *two tones* (or chord) which have no seeming tendency for *mutual melodic progression*, but appear to be *independent chords*, which sound extremely harsh with the real chord. At *i*—* the two voices *passing sound but one tone* (F); the harshness is thus not so pronounced as at *k* (see 166—Remark).

166. **Alternating Tones and Appoggiaturas in Two and More Parts.**—The progression in two voices of parallel *thirds* and *sixths* is harmonically satisfactory (165—N. B.). Alternating tones and appoggiaturas in two parts are generally employed in a progression of *thirds* and *sixths*.

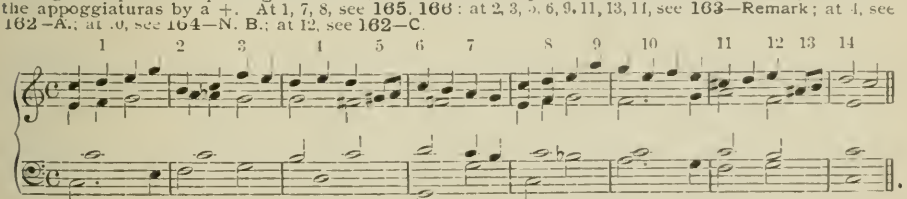
A.—ALTERNATING TONES IN TWO PARTS in *parallel motion* in *thirds* (*a*) and *sixths* (*b*).



B.—ALTERNATING TONES IN THREE PARTS in *six-chords* (*c*), in *contrary motion* (*d*).

C.—APPOGGIATURAS IN TWO PARTS in *parallel motion*—in *thirds* (*f*) and *sixths* (*g*).

D.—APPOGGIATURAS IN THREE PARTS—in *parallel motion* (*h*)—in *contrary motion* (*i*). See 165—Remark.

REMARK.—The alternating tones in three parts, at *d*—*, form three tones (*root, fifth, seventh,*) of a DIMINISHED SEPT-CHORD; as such they are dissonant intervals, which must resolve. At *i* the appoggiaturas in three parts likewise form *discords* which must resolve. The examples of alternating tones and appoggiaturas in three parts at *d* and *i*—* thus form actual discords (real chords—see 167—N. B.); consequently not all the tones of the harmony (dominant-sept-chord) with which these alternating tones and appoggiaturas occur can be sounded at the same time, as the discord would be too great, as at *e*. Only the *root* and *fifth* of the chord are given, as at *c, d,* and *h, i*. In the examples at *a, b,* and *f, g*, the alternating tones and appoggiaturas appear in but *two parts*—PARALLEL MOTION, which gives them more the character of MELODY (see 165—Remark), not harmony (chords), as at *d, e, h, i*.

Another explanation of the combination of tones at *c, d, h, i*, will be found in 172.

EXERCISE LXII.—Indicate the *passing tones, alternating tones,* and *appoggiaturas* in the following example. The passing tones should be indicated by a —, the alternating tones by a ⌣, and the appoggiaturas by a +. At 1, 7, 8, see 165. 166: at 2, 3, 5, 6, 9, 11, 13, 14, see 163—Remark; at 4, see 162—A.; at 10, see 164—N. B.; at 12, see 162—C.

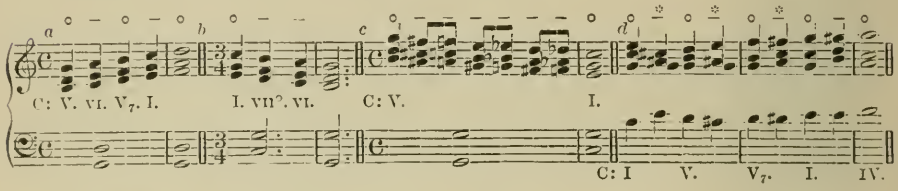


167. **Passing Chords.**—Passing tones are tones foreign to the harmony, employed upon the *unaccented part of a measure* (**161—Remark**) in passing from a tone of a chord to another (**161**—N. B.).

N. B.—Passing tones may be employed in ONE (161), TWO (165) and THREE PARTS. Passing tones in *three parts* form REAL CHORDS which, as they occur upon the *unaccented part of the measure* (like the *passing tones*) are called PASSING CHORDS.

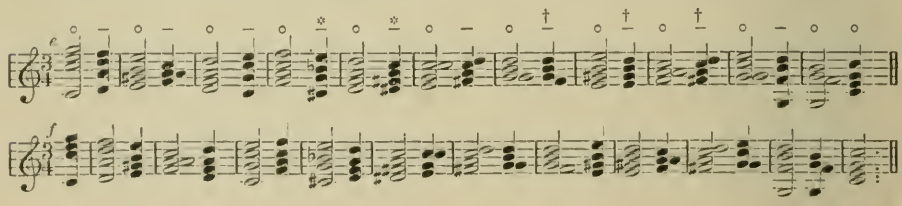
A.—PASSING SIX-CHORDS: *diatonic* (*a*, *b*), *chromatic* (*c*).

B.—PASSING CHORDS—*Diminished sept-chord* (*d*).



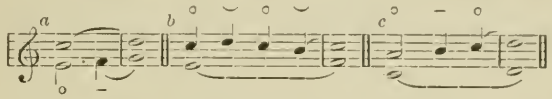
The *diminished sept-chord* is the most useful of all discords as a *passing chord*, as its combination of *four tones* forms a very mild discord, which is easily introduced (**118—B**), and is very pliant in its resolution (**121—N. B.**). At *d* and *e* the passing chords marked with a * are *diminished sept-chords;* the passing chords marked with a † are *dominant sept-chords* (see Remark).

MAXIM.—The chords upon the *accented part of a measure* (**161—Remark**) should be essential, principal chords of the scale (see **197**). Between these upon the *unaccented part of the measure* the PASSING CHORDS are employed (as at *a*, *b*, *c*, *d*). Even should the passing chords be foreign to the scale (as at *c* and *d*) the tonality of the scale would not thereby be destroyed, as the *passing chords* appear upon the unaccented part of the measure *between* the *essential chords* of the scale upon the accented part (as at *d*).

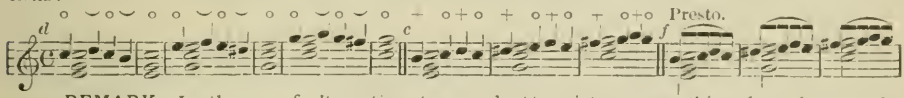
The effect of passing chords upon the *accented part* of the measure instead of the *unaccented part* may be observed in the following. By placing the example in **148** in 3-4 time we bring out the character of *passing chords* more decidedly (at *e*), and by placing these *passing chords* upon the accented part of the measure (at *f*) we may observe the effect of their *misplaced* position (see **148—Remark**).

REMARK.—The passing chords at *a*, *b*, and *c* have really the character of passing chords, as all three of the upper voices employ diatonic and chromatic passing tones. This is not the case at *d* and *e* where the voices move by degrees or skip into the passing chords. These chords must consequently be treated as real chords whose *resolution* being irregular perhaps, *must* nevertheless *be carefully observed*. If such chords are sounded simultaneously with *one* or *more* tones of another chord (as at *d*—**166**) it can be brought about only under certain conditions which will be explained in **172—Remark**. It will be seen that most of the *passing chords* at *d* and *e* are chords of a *mild, dissonant character* (**118—N. B.**), whose dissonant intervals are very pliant but decided in their resolution, which makes them very useful in this connection.

168. Application of Accidental Dissonants.—The PASSING TONES in *one* (161) and *two voices* (165), the ALTERNATING TONES in *one* (162) and *two voices* (166—A) and the APPOGGIATURAS in *one* (163) and *two voices* (166—C) are accidental dissonants which have more the character of MELODY than *harmony* or chords (see 165—Remark).

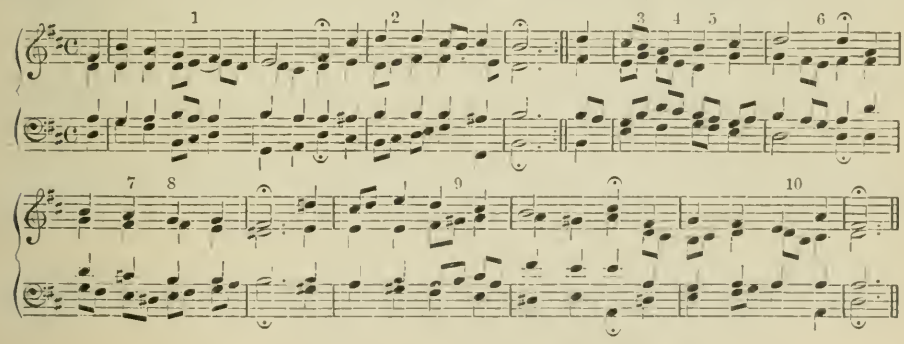
N. B.—*Passing tones, alternating tones*, and *appoggiaturas* are treated as MELODIC PROGRESSIONS (*melodic embellishments*). They are consequently not subject to the rules governing *four-part harmony*, but conform to the *melodic* demands of the *diatonic major* and *minor scale*. PARALLEL FIFTHS and OCTAVES (42) resulting through *passing tones* (*a, c*) and *alternating tones* (*b*) are faulty, and must be avoided.



MAXIM.—The *passing tones, alternating tones*, and *appoggiaturas* may be employed in *any voice*. The *alternating tones* and the *appoggiaturas* should not be sounded simultaneously (*same pitch*) with the chord-tone, as this would occasion a FAULTY DOUBLING (see 153—Maxim), as at *d, e*. The *alternating tone* and the *appoggiatura* may be sounded simultaneously with the chord-tone *if the latter appears an* OCTAVE APART *from the former*, as in all examples in 162, 163, 164, 166—A—C; not thus:



REMARK.—In the use of *alternating tones* and *appoggiaturas* everything depends upon the *rapidity* of the movement of the composition in which they occur. The example at *e* would be faulty in a slow or even moderate movement, but in a rapid movement, as at *f*, it would not be objectionable.

EXERCISE LXIII.—The following choral from Bach's Passion music of St. Matthew should be analyzed. The pupil should mark the degrees, as in Ex. LXII.—166, indicate the *suspensions*, the *passing tones*, *alternating tones*, and *appoggiaturas*. At 1, 3, see 167—Maxim; at 2, 4, 5, 9, see 165—A B.; at 6 see 166—A; at 7 see 163—Maxim; at 8 see 153—N. B.; at 10 see 158—B—1.

QUESTIONS TO CHAPTER XII.

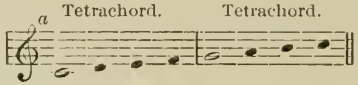
162—161. What is a *passing tone*? 163—161. Upon which part of a measure are the passing tones employed? 164—161. Which are the accented parts of the measure in 4-4 time and 3-4 time? 165—162. What is an *alternating tone*? 166—162. Upon which part of the measure are the alternating tones employed? 167—163. What is an *appoggiatura*? 168—163. Upon which part of a measure are the appoggiaturas employed? 169—163. What does the word appoggiatura signify? 170—164. What is a double appoggiatura? 171—165. Which intervals are most adapted for forming passing tones in two parts? 172—165, 166. Which motion is especially employed in the use of passing tones in two parts? 173—167. What is a *passing chord*? 174—167. Which discord is especially useful as passing chord? and why? 175—167. What chords ought to be placed upon the accented part of a measure? 176—168. How are *passing tones, alternating tones* and *appoggiaturas* treated? 177—168. What are the passing tones, alternating tones and appoggiaturas termed collectively?

Chapter XIII.

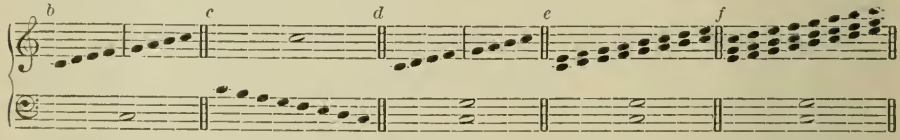
ORGAN POINT (PEDAL TONE)—STATIONARY TONES.

169. Stationary Tones.—Besides the *accidental dissonants* mentioned in 168 there is still another instance in which a tone *foreign to the harmony* is employed.

N. B.—The TONIC is the essential or *generating tone* of the scale (5—A, and 28). The DOMINANT is the next in importance (5—B). The *tonic* and *dominant* (*first* and *fifth* tone of the scale) are the first tones of the two halves (TETRACHORDS —4) of the scale (*a*).



MAXIM.—The TONIC as *generating tone* of the diatonic scale is the TONAL BASIS or *foundation* of the whole scale (at *b*); and by adding the DOMINANT this *tonal basis* is strengthened (at *d*). Thus *one* (*b*, *c*) or *both* (*d*) of these tones, forming the *tonal* or *scale basis*, may remain stationary while *one* (*b*, *c*, *d*), *two* (*e*) or *more voices* (*f*) pass through the diatonic tones of the scale; thus:



REMARK.—If a voice retains a tone while other voices move through a succession of chords, the retained tone is called a STATIONARY TONE (*b* to *f*).

170. Organ Point on the Tonic.—*Stationary tones* (169—Remark) are generally found in the Bass; and as such tones were first employed upon the organ they are called ORGAN POINT or PEDAL TONES.

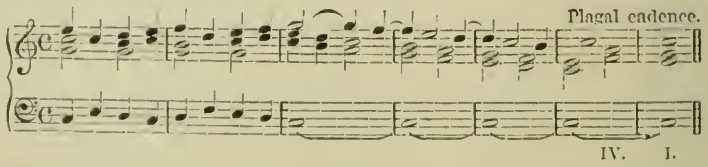
The following conditions must be observed in the application of the *organ point*:

A.—The STATIONARY TONE (*organ point*) must, at its introduction, be one of the tones of the chord with which it is sounded.

B.—The *organ point* must, when it ends, be one of the tones of the chord which is sounded with it.

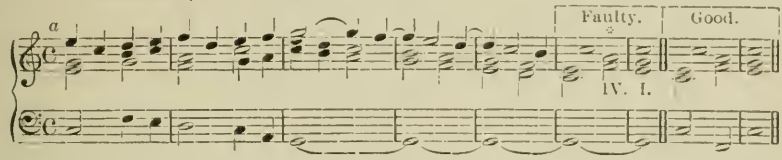
C.—The *organ point* may be employed at the *beginning*, *middle*, or at the *end* of a composition; it must ALWAYS be introduced at a definite rhythmical division however—at the beginning of a *section*, *phrase* or *period*.

MAXIM.—The TONIC or *tonal basis* of the scale (169—Maxim) is most frequently employed as *organ point* or *pedal tone*, thus:

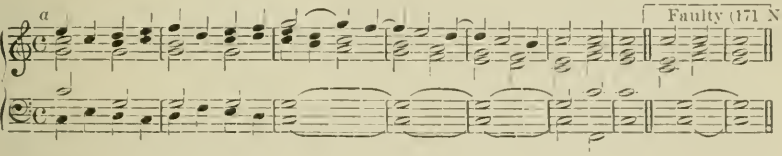
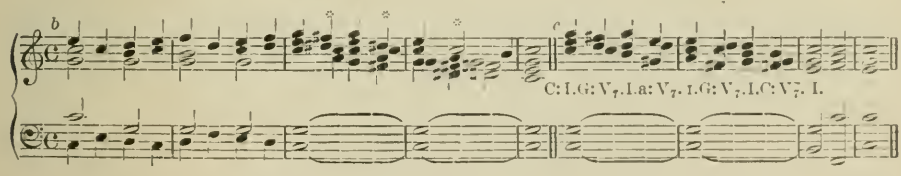


REMARK.—The above *organ point* on the TONIC begins and ends with the *root* of the tonic triad (see A—B). It begins after the first two measures (section) and continues to the end, while the other voices descend in a succession of six chords, with suspensions above the *sixth* in the upper voice. The upper voices progress according to the rules of four-part harmony without reference to the *organ point*.

171. Organ Point on the Dominant.—As was stated in 169—N. B., the DOMINANT (*fifth tone* of the scale) is the first tone of the second tetrachord. It is also, after the *tonic*, the most important tone of the scale (5—B).

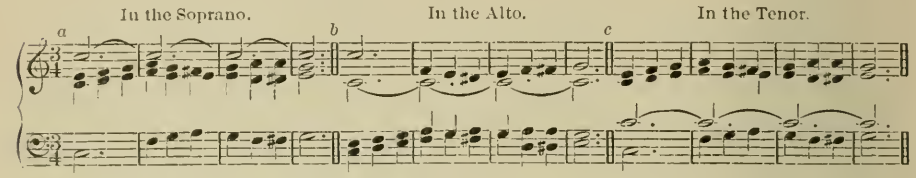
MAXIM.—The DOMINANT, constituting with the *tonic* the *tonal basis* of the scale (169—Maxim), is frequently employed, in the Bass, as *stationary tone*—ORGAN POINT. The conditions governing its application are the same as those governing the tonic (170—A, B, C). The *plagal cadence*, however, can not be employed with the organ point on the *dominant* (see N. B.).

N. B.—The foregoing *organ point* on the DOMINANT begins with the *fifth* of the tonic triad (see 170—A). Its first ending is faulty, as the organ point continues while the upper voices form the *plagal cadence* (at *), which is harmonically very unsatisfactory. Besides, the *organ point* (the Bass) ends with the *fifth* of the tonic triad which, although being a tone of the chord, is nevertheless faulty, as the cadence thereby becomes incomplete (*imperfect*, 125—B), closing with the *four-six chord*.

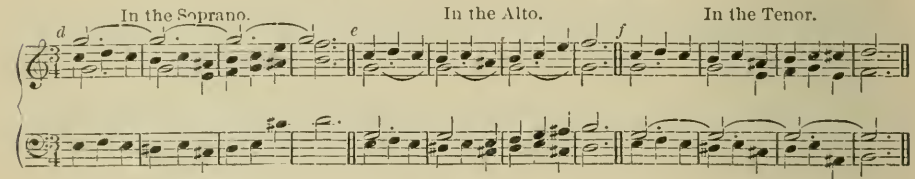
172. Organ Point on the Tonic and Dominant.—The *tonic* and *dominant* sounded simultaneously constitute the *tonal basis* of the scale (169—Maxim).

N. B.—The *tonic* and *dominant* may consequently be employed simultaneously as *stationary tones*—ORGAN POINT in the Bass. Their application as such requires the same considerations as does the single stationary tone. See 170—A, B, C.

REMARK.—The foregoing organ point in the Bass on the *tonic* and *dominant* begins with the *root* and *fifth* of the tonic triad and ends with the same. The two tones (*tonic* and *dominant*) thus decidedly establish the TONAL BASIS (*foundation*) of the scale (169—Maxim). The other chords do not disturb this, as they are all chords belonging to the same key (169, at *f*). Even if the chords are not all of the same key as at *b*, the double organ point (on the *tonic* and *dominant*) would, notwithstanding, maintain the foundation (*tonal basis*) of the original key; thus:

The chords at *b*, marked with a *, are *diminished sept-chords* which have the character of passing chords (167—B) upon the unaccented part of the measure, while the essential (principal) chords of the scale fall upon the accented part of the measure (167—Maxim). These passing chords do not consequently materially disturb the foundation (*tonal basis*) of the key. It is faulty, however, to employ a succession of chords that are too foreign to the stationary tone—*organ point* (as at *c*); as the *tonal basis* of the key would be completely destroyed thereby, which would make it appear as if there existed no relation between the harmony and the stationary tone.

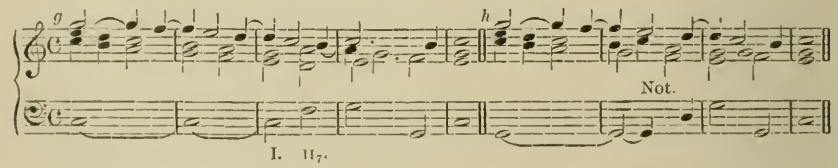
173. Stationary Tones in Various Parts.—Stationary tones, if employed in the Bass (being the most frequent—as the Bass is the most weighty in *tone power*—**153**), are called PEDAL TONES or ORGAN POINT. The stationary tone, by being placed in the Bass, receives a certain character of foundation—*tonal basis* (**169—Maxim**); this is not the case if it be placed in an upper voice.

MAXIM.—STATIONARY TONES on the *tonic* (**170**) and *dominant* (**171**) may be employed in any voice, *if the voice* (or *part*) *be sufficiently weighty in* TONE POWER to establish itself as an individual voice *against the harmony* in the other parts The application is subject to the conditions mentioned in **170—A, B, C.**

STATIONARY TONES ON THE TONIC.

STATIONARY TONES ON THE DOMINANT.



N. B.—A *stationary tone* or *organ point* may be discontinued whenever it constitutes one of the tones of one of the accompanying chords, as at *g*, not as at *h*. The voice holding the stationary tone must—when discontinuing the latter—then proceed according to the rules of chord connection, thus:



REMARK.—Stationary tones in the *upper voices* on the *tonic* and *dominant* simultaneously (as in the Bass—**172**) are not practical, as the two tones do not establish the character of foundation—*tonal basis* **169—Maxim**) if placed in the upper voices. The stationary tone in the upper voice has neither sufficient tone power to permit of a succession of discords in the other voices—as in the case with the *organ point* in the Bass (at *g* and *h*). The succession of chords which are sounded with a stationary tone in an upper voice should, consequently, not be too discordant with the stationary tone (as at *a* to *f*). The succession of chords at *g* (see **170, 171**) would be *faulty* if the stationary tone were placed in an upper voice (see **172—Remark**).

QUESTIONS TO CHAPTER XIII.

178—**169.** Which tone is the *generating tone* or *tonal basis* of the scale? 179—**169.** Which two tones of a scale establish the scale foundation or *tonal basis* of a scale? 180—**169.** What is a stationary tone? 181—**170.** What is an *organ point* or *pedal tone?* 182—**170, 171.** Which tones of the scale are employed as organ points? 183—**170.** What are the rules regarding the application of an organ point? 184—**172.** Which two tones may be employed simultaneously as organ point? 185—**173.** Which tones may be employed as stationary tones in the upper voices?

Part III.—Elements of Composition.

Chapter XIV.

MODULATION.

174. Modulation.—Modulation occurs whenever the character (tonality—32) of a key is changed by employing *tones* or *chords* belonging to other keys; thereby establishing the tonality of another key.

N. B.—MODULATION CONSISTS IN PASSING FROM ONE KEY TO ANOTHER.
A modulation may be:
A.—IMPERFECT (see 148—N. B.). B.—PERFECT (see 177).
In the former the new key is *not definitely established* but only indicated by *diatonic tones* or *chords* belonging to another key, while in the latter the tonality of the new key is *gradually* prepared and finally fixed (established) by means of the CADENCE (see 146—Remark).

175. Discords Establishing a Key.—There are but few discords which, in their regular resolution, definitely establish the tonality—*major* and *minor* character of a key.

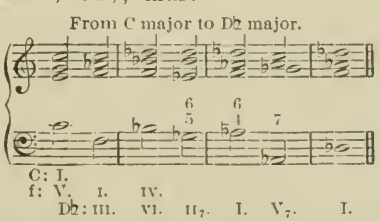
N. B.—All chords containing a DIMINISHED FIFTH are *mild discords* which, in their natural resolution, establish the character of a key (see 118—N. B.). These are:
The DIMINISHED TRIAD (54); the DOMINANT SEPT-CHORD (96); the DIMINISHED TRIAD *with minor seventh* (112); the DIMINISHED SEPT-CHORD (117); and the ALTERED CHORDS with the *augmented sixth* (142, 143, 144).

176. Means Employed in Modulation.—In passing from one key to another such means should be employed as will enable us to reach the new key *gradually* without any harshness.

The essential means employed in modulating from one key to another are:
A.—CHORDS INDEFINITELY LOCATED—*major* and *minor triads* (146—1, 2);
B.—REGULAR AND IRREGULAR RESOLUTION OF DISCORDS—*dominant sept-chord* (126)—*diminished sept-chord* (132—B);
C.—COMMON TONES (38);
D.—ENHARMONIC TONES (see 192—N. B.).

177. Perfect Modulation.—A modulation is either *perfect* or *imperfect* (174). A perfect modulation requires:

A.—A *gradual introduction* of the new key by means of a succession of carefully chosen chords fixing the tonality of the new key (32, 66, 175—N. B.).
B.—The final establishing of the new key through the EXTENDED FOUR-SIX CADENCE (90—N. B., or 132—A, at *a*); thus:



REMARK.—In this example the *f* minor triad gradually prepares the tonality of the key of D-flat major. The latter is, however, finally established by means of the *extended four-six cadence.*

178. Diatonically Related Keys.—A major scale is composed of two halves of equal proportions called *tetrachords* (4—Remark). The two tetrachords of a scale are likewise contained in other scales, so that the diatonic tones of a major and minor scale are found in other major and minor scales.

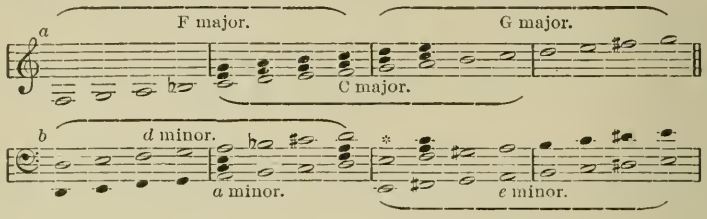
N. B.—Keys which are related to one another on account of the many identical diatonic tones are called DIATONICALLY RELATED KEYS (*a*, *b*).

A.—MAJOR KEYS related to a *major key* are: the *major key* a fifth above—DOMINANT KEY, and the *major key* a fifth below—SUB-DOMINANT KEY (at *a*).

B.—MINOR KEYS related to a *major key* are: its *relative minor*—SUB-MEDIANT KEY; the *relative minor* of the dominant—MEDIANT KEY, and sub-dominant—SUPER TONIC KEY (at *b*).

C.—MINOR KEYS related to a *minor key* are: the *minor key* a fifth above—DOMINANT MINOR KEY (Remark), and the *minor key* a fifth below—SUB-DOMINANT KEY (at *b*).

D.—MAJOR KEYS related to a *minor key* are: its *relative major*—MEDIANT KEY, and the *relative major* of the sub-dominant—SUB-MEDIANT KEY (at *a*).

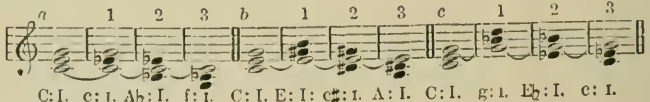


REMARK.—The six *diatonically related keys* are not only related through the diatonic tones but also on account of the *tonic triads*. That is, the *tonic triads* of the six diatonically related keys of C major are triads belonging to the latter scale (as at *a*). The *tonic triads* of the diatonically related keys of *a* minor (C and F major and *d* minor) are likewise found in the latter key, with the exception of the *tonic triad* of the DOMINANT KEY (*e* minor, at *). The chord upon the fifth degree of the minor scale is a *major triad* (67—N. B.). The related key upon the fifth degree, however, cannot be a *major key*, as the diatonic tones of the major key (E major) would be too foreign to the original minor key (*a* minor).

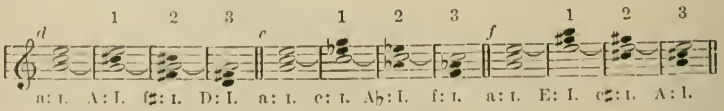
179. Tonic Related Keys—Common Tone.—The six diatonically related keys are related in various ways (178—Remark). There are, however, other keys related to a *major* or *minor* key.

N. B.—The three tones—*root*, *third* and *fifth* of the TONIC TRIAD of a major (*a*, *b*, *c*) or minor key (*d*, *e*, *f*)—may become *root*, *third* or *fifth* of a TONIC TRIAD of other major and minor keys. The *common-tone* (38) thus brings about a relation of keys which are called TONIC RELATED KEYS; *e. g.*:

Tonic related keys of C major.



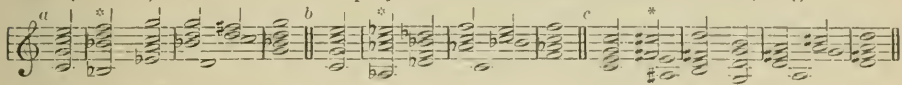
Tonic related keys of *a* minor.



REMARK.—Of the above *tonic related keys* those at *a* 2, *b* 1 and 3, and *c* 2 are those most frequently employed as keys related to a *major key*. In the major scale they are the major keys based upon the *major* and *minor sixth* and *major* and *minor third* (in C major: A and A-flat and E and E-flat major). The relation of keys at *a* 1 and 3, and *c* 1, are likewise employed. Those show themselves to be the *minor keys* of the TONIC, SUB-DOMINANT and DOMINANT (*c*, *f*, and *g* minor). (See 178—A.) The *tonic related keys* of a tonic minor triad most employed are the major key of the same key-note, as at *d* 1, and the major key a fifth above, as at *f* 1 (in *a* minor: A and E major).

180. **Mediating Chord.**—In modulation we leave the *tonality* of a key for that of another.

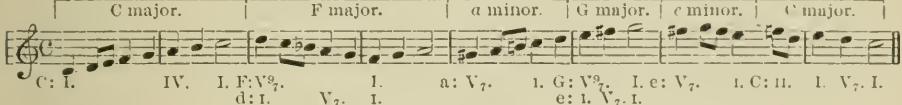
N. B.—In modulating from one key to another it is at times very desirable and, in certain cases, especially effective to destroy the tonality of the established key by a chord wholly foreign to it. The tonality of the established key is thereby disturbed and the ear is left in doubt until the new tonality is established by the *four-six cadence* (as at *a*). A chord thus employed is termed a MEDIATING CHORD; *e. g.*:



REMARK.—The *mediating chords* at * are foreign to the established key (C major) and also the keys we modulate to. They are the means, however, of destroying the *tonality* of the established key and of preparing the ear for that of the following key.

181. **Modulation in the Melody.**—The *diatonically related keys* are related on account of their common diatonic tones.

N. B.—Each of the six diatonically related keys contain *one* or *two* DISTINGUISHING TONES whereby the tonality of the key is distinguished from that of another (178—N. B.). If such tones occur in the *melody*, the tonality of the established key is disturbed (changed) and MODULATION results, brought about by the *distinguishing tones*, and the harmony to be employed is *suggested* (indicated) *by the melody*; thus:

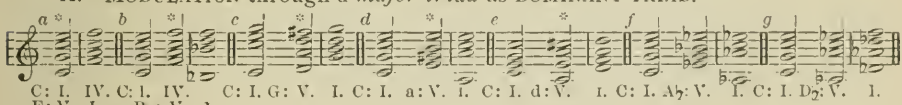


REMARK.—The tones of the melody occurring upon the *accented part of the measure* (in 4-4 time: upon the *first* and *second half*, or *first* and *third quarter*) require, as accompanying harmony, the essential—*primary chords* (197) of the scale (see 31, 66), as these more definitely establish the tonality of the key, as above (see 97).

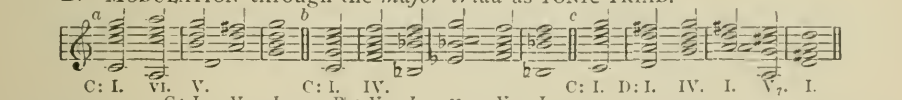
182. **Modulation Through the Major Triad.**—A *major triad* may be found in *five* different keys (146—A—1).

MAXIM.—Any MAJOR TRIAD of the scale—or any *major triad* employed which is foreign to the established key, may be considered a DOMINANT TRIAD (A); a TONIC TRIAD (B); or a *major triad* upon the five degrees of different scales, as demonstrated in 146—A—1.

A.—MODULATION through a *major triad* as DOMINANT TRIAD.

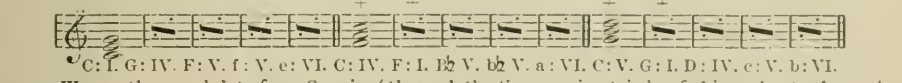


B.—MODULATION through the *major triad* as TONIC TRIAD.



REMARK.—A major scale contains *six* and a minor scale *four* CONCORDS (major and minor triads, 76—A, B). The major triads may become *dominant triads* (as at A—*a*, *b*,—*) and the minor triads—by changing them into major triads, may likewise become *dominant triads* (as at A—*c*, *d*, *e*,—*).

EXERCISE LXIV.—Locate each of the three major triads of C major in the five scales in which they are found, as in example below, and modulate from C major to these keys by adding the *extended* 4-6 *cadence*, as is shown in 146—Remark.

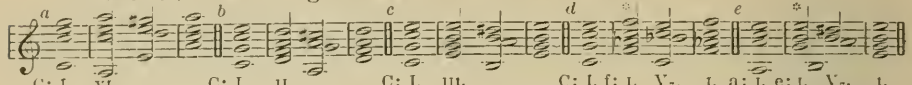


We can thus modulate from C major (through the three major triads of this scale) to the *major keys* of: G, F, B-flat, and D (those marked with a + being brought in relation through the *tonic triad*); and to the minor keys of f, e, b-flat, a, c, and b.

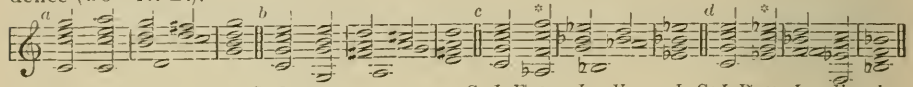
183. Modulation Through the Minor Triad.—A *minor triad* is found in *five* different keys (146—A—2).

MAXIM.—Any MINOR TRIAD of the scale—or any *minor triad* employed which is foreign to the established key, may be considered a TONIC TRIAD (A), or as triad upon the II. degree of a major scale (B), or a minor triad upon the *five* different degrees of different scales mentioned in 146—A—2.

A.—MODULATION through a *minor triad* as TONIC TRIAD.



B.—MODULATION through a *minor triad* as II. degree of a major scale, in the cadence (90—N. B.).



REMARK.—Besides the minor triads of the major (A—*a*, *b*, *c*) and minor scale, the major triads of the major and minor scale—by changing them into minor triads, may likewise be employed as *tonic triads* (as at A—*), or as triads upon the II. degree (as at B—*). The changing of the *major triads* of a major and minor scale into *minor triads* (as at A—* and B—*), or the changing of the *minor triads* of a major and minor scale into *major triads* (as in 182—A at *) is a very effective device frequently employed in modulation. Such chords may be considered as belonging to the *mediating chords* (180—N. B.).

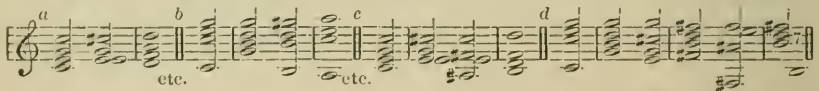
EXERCISE LXV.—Locate the *two* minor triads of *a* minor in the five different keys (146—A—2) in which a minor triad is found as was done with the major triads in 182—Ex.) and modulate to those keys with the minor triad as *tonic triad* (as at A) and triad upon the II. degree (as at B).

184. Modulation Through the Diminished Triad.—The *diminished* triad is found upon the VII°. degree of a major and minor scale and upon the II°. degree of a minor scale.

N. B.—The first inversion of the *diminished triad* is usually employed (86—Remark), rarely the fundamental position. By raising the fundamental of a *major triad* one diatonic half-step we form a diminished triad which resolves, as triad upon the VII°. degree of a major or minor scale, into the *tonic triad* (72—B), or—as triad upon the II°. degree of a minor scale, into the dominant chord (75—B), at *c*, or four-six chord (cadence) of the *tonic triad* (90—N. B.), at *d*.

A.—MODULATION through the *diminished triad* as triad upon the VII°. degree (*a*, *b*);

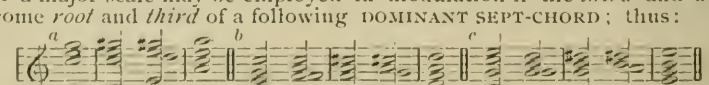
B.—MODULATION through the *diminished triad* as triad upon the II°. degree (*c*, *d*).



REMARK.—The DIMINISHED TRIAD is harmonically a very *weak chord*, lacking firmness as also flexibility, on account of its *one* mild dissonant interval: the *diminished fifth* (175—N. B. It is therefore usually considered as a fragment of the *dominant sept-chord* (95—N. B.). As substitute for the latter it is especially adapted in *three-part harmony*, as the diminished fifth demands a definite resolution into the *tonic triad*.

185. Modulation Through the Augmented Triad.—The augmented triad is found upon the third degree of the minor scale only (70).

N. B.—The AUGMENTED TRIAD as *altered chord* (140) upon the I., IV. and V. degree of a major scale may be employed in modulation if the *third* and *augmented fifth* become *root* and *third* of a following DOMINANT SEPT-CHORD; thus:

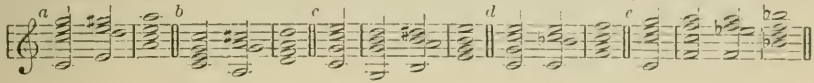


REMARK.—The AUGMENTED TRIAD is a very unsatisfactory chord. On account of its harshness it is rarely employed except as an *altered chord* (140).

186. Modulation Through the Dominant Sept-chord.—The *dominant sept-chord* regularly resolves into the tonic triad, thereby definitely establishing the tonality of a key (97). It is therefore the most effective means of modulation.

N. B.—If in modulating from one key to another the regular resolution of the *dominant sept-chord* of a new key be employed as the modulating medium, the tonality of the new key may thereby be *too suddenly* established (as at *a*, *b*, *c*, *d*, and especially at *e*), which, in a PERFECT MODULATION ought to be avoided (see 177).

MAXIM.—Any MAJOR TRIAD by adding a *minor seventh* becomes a DOMINANT SEPT-CHORD (93—N. B.). The use of the latter in modulation would therefore be sufficient to fix the tonality of a new key in an *imperfect modulation*, but not so in a PERFECT MODULATION, as the tonality would not thereby be sufficiently established. The *extended cadence* of the new key should therefore necessarily follow. See 177.



C: I. a:V_7. I. C: I. d:V_7. I. C: I. V. e:V_7. I. C: I. F:V_7. I. C: I. IV. B♭:V_7. I.

REMARK.—That position of the *dominant sept-chord* which establishes the PERFECT CADENCE (124) ought to be employed in the *extended cadence* only; as it too decidedly produces the effect of a cadence, which should be avoided wherever the dominant chord is employed only as a *modulating medium* (see 106). Another use of the dominant sept-chord in modulation will be pointed out in 190.

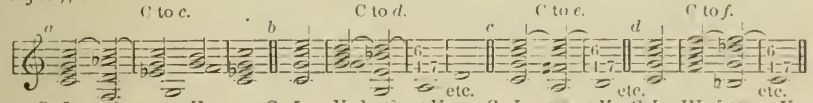
EXERCISE LXVI.—Modulate from the *tonic triad* of C major and *a* minor through the *dominant sept-chord* to the diatonically related keys of these two keys. Add the four-six cadence.

187. Modulation Through the Sept-chord upon the II. Degree.—The sept-chord upon the II. degree resolves into the dominant chord (116—B).

N. B.—The sept-chord upon the II°. degree of the minor scale consists (like the sept-chord upon the VII°. degree of the major scale—108—C) of a diminished triad and a minor seventh. It thus embraces one CONCORD—*minor triad*, and one DISCORD—*diminished triad*. This combination gives the chord certain peculiarities; namely: a *mild dissonant character* (175—N. B.); in certain positions an *harmonic firmness* (118—C); and a *progressive tendency*. As this chord is found in the major and minor scale, its resolution is therefore changeable—flexible (see 112 and 116—B).

MAXIM.—We may accomplish a modulation from a major or minor key to another *minor key* by proceeding to the *sept-chord* upon the II°. degree (diminished triad with minor seventh) of the minor key we desire to modulate to. By employing the *first inversion*—FIVE-SIX CHORD, of this harmony and resolving irregularly (see Remark) to the four-six cadence of the new key, we definitely establish the new tonality through the succession of chords: $II°_7$., I., V_7., I. The sept-chord upon the $II°_7$. degree is thus employed as MEDIATING CHORD (see 180—N. B.), and is at the same time one of the chords constituting the *extended four-six cadence* (132—A).

A.—Modulation through the five-six chord of the sept-chord upon the $II°_7$. degree of a minor scale to the *minor keys* based upon the seven tones of a *major scale* (C major), thus:



C: I. c:$II°_7$. I. V_7. I. C: I. V. d:$II°_7$. I.V_7. I. C: I. e:$II°_7$. I.V_7. C: I. IV. f:$II°_7$. I.V_7.

B.—Modulation through the five-six chord of the sept-chord upon the $II°_7$. degree of a minor scale to the *minor keys* based upon the seven tones of a *minor scale* (*a* minor), thus: $\frac{6}{4}$ $\frac{6}{4}$ $\frac{6}{4}$

a: I. V. *b*: $II°_7$. I. V_7. I.—*a*: I. *c*: $II°_7$. I. V_7. I.—*a*: I. IV. *d*: $II°_7$. I. V_7. I. etc.

REMARK.—The sept-chord upon the II°. degree of the minor scale, as employed in the examples at A, B, resolves irregular, as the *seventh*, instead of descending one diatonic degree, *remains stationary* (132—A). The application of this sept-chord as a modulating medium is most effective *if the seventh be prepared and remains stationary* (as above), thereby becoming ROOT of the *tonic triad* of the new key (190—D—Remark).

EXERCISE LXVII.—Modulate from the TONIC TRIAD of a *major* and a *minor key* through the *diminished triad with minor sevenths* to the *minor keys* based upon the seven tones of a major or minor scale, as at A, B.

188. Modulation Through the Diminished Sept-chord.—The *diminished sept-chord* is the mildest and *most pliant*, and, at the same time, the *weakest* and *most indefinite* of all discords. See **Remark.**

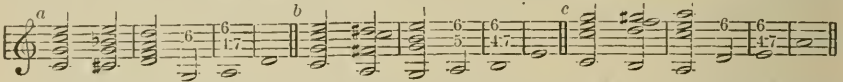
It is therefore especially useful in modulation:

1.—In its *regular resolution* into the tonic triad (**117—N. B.**), as at **A**;

2.—In its *regular resolution* into the *tonic triad* of a MAJOR KEY instead of *minor*,

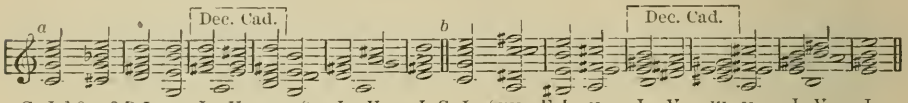
3.—In its *irregular resolution*—most frequently to the four-six chord of the *tonic triad* of a major or minor key (**132—B**). See **191—N. B.**

A.—Modulation through the *diminished sept-chord* of the new key with its regular resolution into the *tonic triad.*



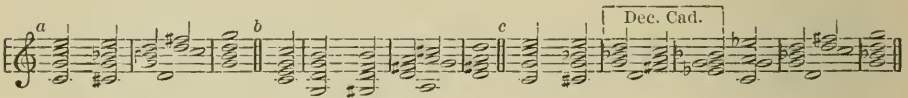
C: I. d:°VII°7.I. II°. I. V7. I. C: I. e:°VII°7. I. II°7. I. V7. I. C: I. a:°VII°. I. II°. I. V7. I.

B.—Modulation through the *diminished sept-chord* with its regular resolution into the tonic triad of a *major key.* See **Maxim.**



C: I d:°VII°.D:I. II7 I. V7 VI. II°. I V7. I. C: I.e:°VII .E:I. II7. I. V7. VI. II7. I. V7. I.

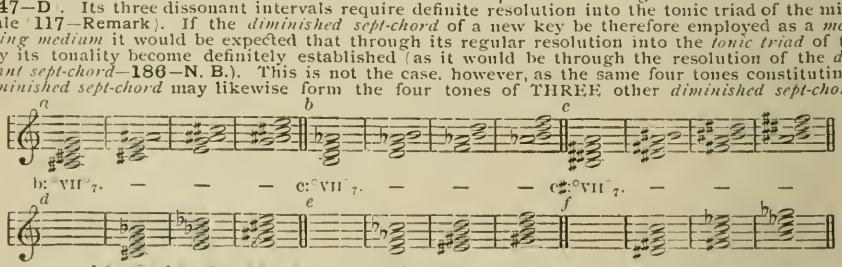
C.—Modulation through the *diminished sept-chord* with an irregular resolution into the four-six chord of the *tonic triad* of a MAJOR (*a*, *b*) or MINOR KEY (*c*). See **132—B.** and **N. B.**



C: I.d:°VII°.G:I. V7. I. C: I. V.a. VII° D:I. V7. I. C: I.d:°VII°.g:I. V7. VI. II°7. I. V7. I.

MAXIM.—Modulations through the *diminished sept-chord* usually sound weak and undecided, even if the extended four-six cadence follows (as in the examples in **A**). However, if the *dominant sept-chord* in the following four-six cadence resolves to the triad upon the VI. degree—thus forming a DECEPTIVE CADENCE (**127—A**), the tonality of the new key will be more *gradually* established, and becomes finally fixed through the *perfect cadence* (as in **B** at *a*, *b*, and **C** at *c*).

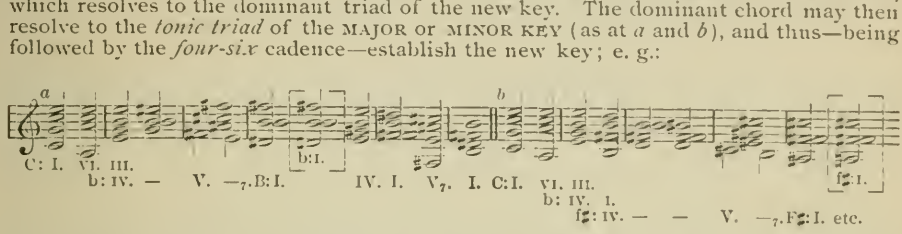
REMARK.—The DIMINISHED SEPT-CHORD is found upon the VII°. degree of a minor scale *only* (**147—D**). Its three dissonant intervals require definite resolution into the tonic triad of the minor scale (**117—Remark**). If the *diminished sept-chord* of a new key be therefore employed as a *modulating medium* it would be expected that through its regular resolution into the *tonic triad* of this key its tonality become definitely established (as it would be through the resolution of the *dominant sept-chord*—**186—N. B.**). This is not the case, however, as the same four tones constituting a *diminished sept-chord* may likewise form the four tones of THREE other *diminished sept-chords.*



The four tones constituting the diminished sept-chord of the key of *b*, *c* and *c*-sharp minor appear in the four positions at *a*, *b* and *c*. Each of the four tones (*root*, *third*, *fifth*, and *seventh*) of these chords may become the ROOT of another *diminished sept-chord*, as at *d*, *e* and *f*. There is no difference IN SOUND between the chords at *a* and those at *d*, but there is a difference to the eye—*in* NOTATION. If we were thus to employ either of the four sept-chords at *a* and *d* in modulating from C major, the ear would certainly not accept these chords as the diminished sept-chords of either *b*, *f* or *g*-sharp minor, but rather as belonging to *d* minor, as this key is nearest related to C major—the established key. The chords at *b* and *e* would be taken as belonging to *a* minor, and those at *c* and *f* as the diminished sept-chord of *c* minor, as these keys are nearest related to C major. If in modulating from C major these chords were to resolve to the *tonic triad* of the keys indicated, the ear would be surprised and the effect would be unusual and even harsh, as the relation of these keys to the established key (C major) would be too distant (see **191—Remark**). Chords having different notation but sounding alike are called ENHARMONIC TONES. See **192.**

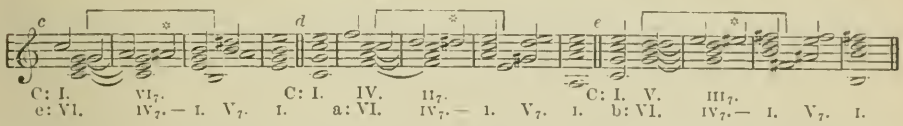
189. Modulation Through the Augmented Six- and Five-six Chord.—The *augmented six-chord* (142—B) and the *augmented five-six chord* (144) resolve into the dominant triad.

A.—The AUGMENTED SIX-CHORD (142) is one of the most decided means of modulation. The latter is brought about by proceeding to the SIX-CHORD of the *minor triad* upon the IV. degree of the MINOR SCALE we desire to modulate to, and raising the fundamental *one diatonic half-step*—thus forming the AUGMENTED SIX-CHORD, which resolves to the dominant triad of the new key. The dominant chord may then resolve to the *tonic triad* of the MAJOR or MINOR KEY (as at *a* and *b*), and thus—being followed by the *four-six* cadence—establish the new key; e. g.:

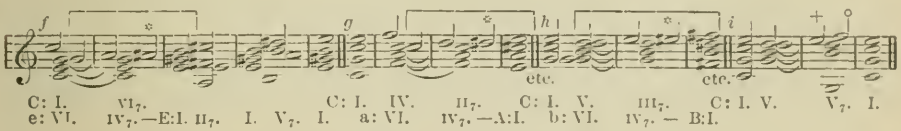


B.—The AUGMENTED FIVE-SIX CHORD (144), like the *augmented six-chord*, definitely resolves into the dominant triad. It is much more decided in modulation than the *augmented six-chord*, as it contains four tones which, in sound, are identical with the *dominant sept-chord* (see Remark). In its resolution into the dominant triad, however, there will always be found a *parallel fifth* (see 144—Maxim). It is therefore most frequently employed:

1.—In its resolution into the four-six chord of the *tonic* MINOR *triad* of a new minor key, as at *c*, *d*, *e*.



2.—In its resolution into the four-six chord of the *tonic* MAJOR *triad* of a new *major* key, as at *f*, *g*, *h*.



MAXIM.—In order to modulate through the *augmented five-six chord* we may proceed to the MAJOR TRIAD *upon the* VI. *degree of the* MINOR KEY we desire to modulate to. By retaining these three tones of the triad and proceeding *in an upper voice* (see Remark) from the *fifth* of this triad one degree upward to the fundamental of the *sept-chord* upon the IV. degree, and then raising this fundamental, we form the AUGMENTED FIVE-SIX CHORD (as at *, in example *c*, *d*, *e*, *f*, *g*, *h*), which resolves as pointed out in 1 and 2.

REMARK.—The AUGMENTED FIVE-SIX CHORD is identical in sound with the *dominant sept-chord*. However, the *augmented sixth* in the AUGMENTED SIX- A) and AUGMENTED FIVE-SIX CHORD (B) always *ascends* one diatonic half-step, while the *minor seventh* in the DOMINANT SEPT-CHORD always *descends* one diatonic half-step. The four tones in brackets, in the examples at 1, 2, by being taken by the upper voice, *ascending diatonically* and *chromatically*, prepare the ear for the upward resolution of the *augmented sixth* (142—A); which otherwise might be taken as the *minor seventh* of the DOMINANT SEPT-CHORD (as at *r*. See 190—F.

EXERCISE LXVIII.—Modulate through the *augmented six-chord* or the *augmented five-six chord* from C major and *a* minor to all the other major and minor keys. In order to reach the *minor triad* and *major triad* mentioned in A and Maxim, it may be necessary to employ *mediating chords* (see 180 and other means pointed out thus far (see 183—Remark). If the tonality of the new key should not be sufficiently established by the following four-six cadence the *deceptive cadence* may be employed, as demoustrated in 188—Maxim.

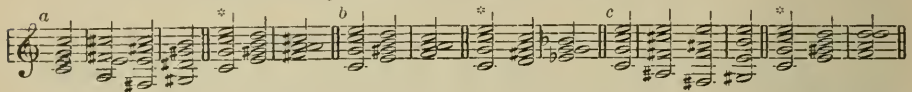
190. Modulation Through the Deceptive Cadence.—Modulation through the regular resolution of the *dominant sept-chord* has been noticed in 186. The latter's *mild dissonant character*, as also its *harmonic firmness* and *flexibility* of *resolution* is a very effective means of modulation.

N. B.—A DOMINANT SEPT-CHORD may be employed in modulation in its regular resolution (see 186) or in its irregular resolutions—DECEPTIVE CADENCE (126), as a MEDIATING CHORD (180), as follows:

A.—Into the MINOR TRIAD a *major second above* (127—A, *a*), *a ;*

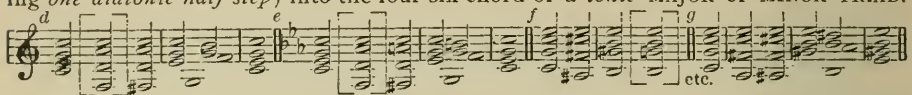
B.—Into the MAJOR TRIAD a *minor second above* (127—A, *b*), *b;*

C.—Into the TRIAD (mostly six-chord) a *major second below* (128—A, *a*), *c*.



C: I. B: V_7. — VI. C: I. A: V_7. VI. C: I. a: V_7. VI. C: I. g: V_7. VI. C: I. B: V_7. — IV. C: I. a: V_7. IV.

D.—From the first inversion—*five-six chord* (LEADING TONE in the Bass ascending *one diatonic half-step*) into the four-six chord of a *tonic* MAJOR or MINOR TRIAD.



C: I. II_7. G: V_7. C: I. V_7. I. c: I. $II°_7$. g: V_7. c: I. V_7. I. C: I. B: V_7. E: I. or e: I. C: I. e: $II°_7$. B: V_7. E: I. V_7. I.

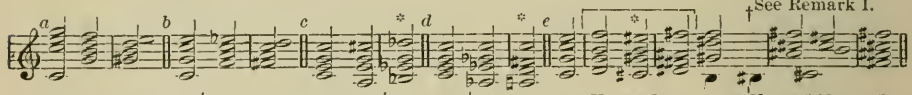
REMARK I.—In this irregular resolution the *dominant sept-chord* stands instead of the sept-chord upon the II. degree of the *major* (*d*) and *minor scale* (*e*), which in its irregular resolution likewise resolves into the four-six chord of a tonic triad (see 187—Maxim and Remark). It is also frequently employed *after* the sept-chord upon the II. degree (as at *g*).

E.—Into another *dominant sept-chord.*

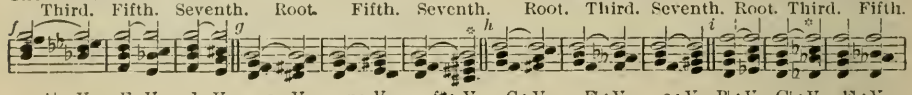
1.—By raising the ROOT an *half-step* and lowering the FIFTH an *half-step*—thus resolving into the dominant sept-chord of the KEY a *minor third below* (at *a*, *b*).

2.—By raising the ROOT an *half-step* and lowering the FIFTH an *half-step*—thus forming the dom. sept-chord of the KEY an *aug. fourth* or *dim. fifth* above (at *c*, *d*, *e*).

3.—By retaining the *root* (*f*), *third* (*g*), *fifth* (*h*), or *seventh* (*i*) as *common tone*, thereby becoming *root*, *third*, *fifth* or *seventh* of other DOM. SEPT-CHORDS (*e*, *f*, *g*, *h*, *i*).



C: I. V_7. a: V_7. C: I. B♭: V_7. G: V_7. C: I. d: V_7. A♭: V_7. C: I. D♭: V_7. G: V_7. C: I. V_7. F♯: V_7. VI. II_7. c♯: V_7. F♯: I. V_7. I.

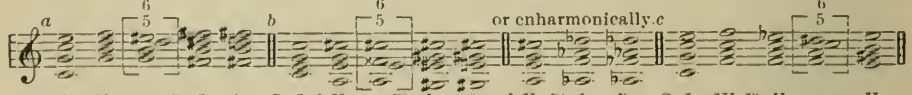
The fundamental becomes: Third. Fifth. Seventh. Root. Fifth. Seventh. Root. Third. Seventh. Root. Third. Fifth.

A♭: V_7. F: V_7. d: V_7. e: V_7. a: V_7. f♯: V_7. G: V_7. E♭: V_7. a: V_7. B♭: V_7. G♭: V_7. E♭: V_7.

REMARK II.—In the foregoing succession of *dominant sept-chords* at *a*, *b*, *c*, *d* and *e*, there are TWO *common tones*, and in most examples at *f*, *g*, *h* and *i* only ONE. In the examples marked with a *, however, one of those common tones had to be *enharmonically changed* (191—Remark). At *e* the second *dominant sept-chord* forms another DECEPTIVE CADENCE (see A). See 188—Maxim.

F.—By resolving it as if it were an AUGMENTED FIVE-SIX CHORD—*enharmonically changing* or taking the *minor seventh* as an *augmented sixth* (see 189—Remark), and resolving it *one half-step upward:*

1.—Into the four-six chord of a TONIC *major* or *minor triad* a MAJOR THIRD ABOVE (at *a*, *b*).

2.—Into a *major triad* an HALF-STEP BELOW (at *c*).



C: I. V_7. B: I. or b: I. C: I. d: V_7. C♯: I. or c♯: I. d: V_7. D♭: I. or d♭: I. C: I. IV. B♭: V_7. a: V. E: I.

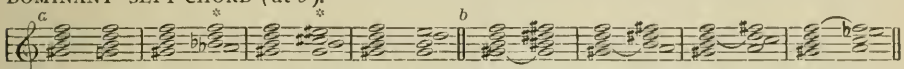
REMARK III.—The parallel fifth occurring in the connection of chords at *c* is least objectionable, and is sometimes used in the above position of the chords. See 144—Maxim.

191. Modulation Through the Deceptive Resolution of Discords.—The discords most frequently employed in their *irregular resolution* in modulation are: The *dom. sept-chord* (190), the *sept-chord* upon the II°. degree of the minor scale (187—Maxim), and the *dim. sept-chord* (188—C).

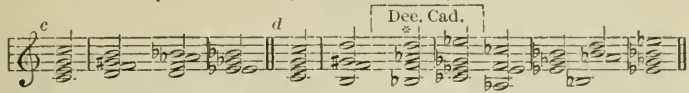
N. B.—The value of the aforementioned discords as *modulating mediums* have already been pointed out. Besides the regular and irregular resolution of the DIMINISHED SEPT-CHORD mentioned in 188—A, B, C, there are several other *irregular resolutions* of the latter which are particularly useful. They are:

A.—By lowering any *one tone* of a DIMINISHED SEPT-CHORD an *half-step* we form a DOMINANT SEPT-CHORD (at *a*).

B.—By raising *three tones* of a DIMINISHED SEPT-CHORD an *half-step* we form a DOMINANT SEPT-CHORD (at *b*).



a:°VII°$_7$C:V$_7$ a:°VII°$_7$E♭:V$_7$ a:°VII°$_7$F♯:V$_7$ a:°VII°$_7$A:V$_7$ a:°VII°$_7$C♯:V$_7$ a:°VII°$_7$E:V$_7$ a: VII°$_7$G:V$_7$ a:°VII°$_7$B♭:V$_7$.
e:V$_7$ c♭:V$_7$ f♯:V$_7$ a:V$_7$ c♯:V$_7$ e:V$_7$ g:V$_7$ b♭:V$_7$.

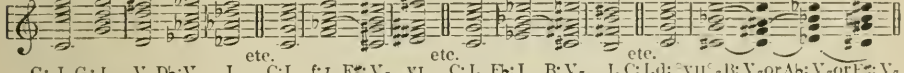
REMARK.—The examples at *a* and *b* point out the possible modulations resulting through the *irregular resolution* of a DIMINISHED SEPT-CHORD. Their value depends wholly *upon the manner of their application* (see 194—Remark . The modulation to some of these SIXTEEN DIFFERENT KEYS —EIGHT *major keys* and EIGHT *minor keys* (at *a*, *b*) would be very objectionable if brought about as at *c*, but would be more acceptable as at *d* (see 188—Maxim).

C: I. a:°VII°$_7$.c♭:V$_7$. I. C: I. a:°VII°$_7$.c♭:V$_7$. VI. II°$_7$. I. V$_7$. I.

As was demonstrated in 188—Remark the *regular resolution* of the *diminished sept-chord* does not always establish a definite tonality, much less its *irregular resolution*, as above . This sept-chord is therefore most useful as a MEDIATING CHORD (180). It will be observed that some of the four tones in their connection with the following dominant sept-chord must be *enharmonically changed* (as at *a* and *d*—*), so as to form the proper intervals of the dominant sept-chord (see 192—N. B.).

192. Modulation Through Enharmonic Changes.—Two or more tones may be identical in *sound* but different in *notation*.

N. B.—Tones differently named and of different notation (as A♯, B♭, C♭♭), but sounding alike if played upon tempered instruments, such as: the piano, the reed instruments, and most brass instruments, are called ENHARMONIC TONES.

MAXIM.—ENHARMONIC TONES are frequently the means of enabling us to modulate to distant keys. By retaining such tones as *common tones* the connection between very distant keys (or chords) is accomplished, thereby agreeably preparing the ear for the tonality of the new key (as at *a*, *b*, *c*).



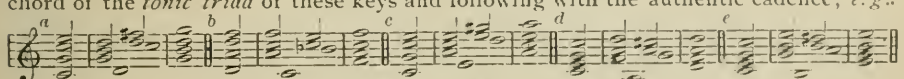
C: I. G: I. V. D♭:V$_7$. I. C:I. f: I. F♯:V$_7$. VI. C:I. E♭:I. B:V$_7$. I. C:I. d:°VII°$_7$B:V$_7$ or A♭:V$_7$ or F♯:V$_7$

REMARK.—At *a* and *c* a tone of a *major triad* constitutes the *enharmonic common tone*, and at *b* two tones of a *minor triad*. The *diminished sept-chord*, however, is the most useful of all chords for this purpose (as at *d*) as its four tones do not establish a definite tonality (see 188—Remark).

193. Modulation Through the Four-six Chord.—The *four-six chord* has a decided inclination for resolution—89—N. B.

N. B.—Whenever the four-six chord of a *major* or *minor triad* occurs upon the *accented part of the measure* it will then appear as a TONIC TRIAD, and the ear expects the *dominant chord* to follow, thereby suggesting the four-six cadence (see 89).

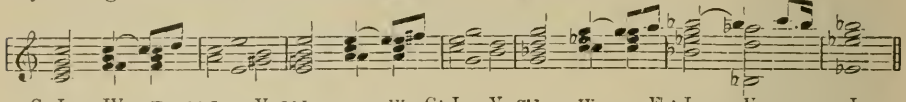
MAXIM.—In modulating to the *diatonically related keys* (178) the four-six chord is especially adapted in accomplishing these modulations, by employing the four-six chord of the *tonic triad* of these keys and following with the authentic cadence; *e. g.*:



C: I. G: I. V$_7$. I. C: II. F: I. V$_7$. I. C: I. a: I. V$_7$. I. C: I. d: I. V$_7$. I. C: I. e: I. V$_7$. I.

194. Modulation Through the Sequence.—A *sequence* is an imitation *in regular intervals* of a PHRASE or MODEL (see 58).

N. B.—The SEQUENCE is a very effective musical device frequently employed in modern compositions. It is especially useful in modulation, on account of the recurring *phrase*, which assists us in concealing the intention of modulating. A modulation through the sequence would consequently not be observed, as we would reach the new key through the THEMATIC DEVELOPMENT of a *subject* (or model); thus:

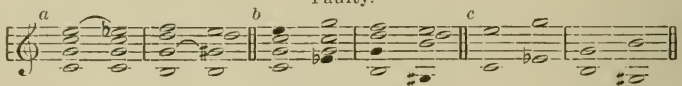


REMARK.—Sequences should be employed only wherever the development of a *melody* or *subject* naturally suggests them. To introduce them solely for the purpose of modulating were as objectionable as would be a sudden modulation without a sequence. The harmony to be employed in a sequence does not necessarily need be the same (as to the kind of chords) as is contained in the model, as may be seen above. Rules can not be given. The application of the sequence, as also the harmonies employed in it, are conditioned by the *intentions* of the composer, who, in all cases, ought to be guided by a *refined musical taste*. See the citation from Wagner's Lohengrin—149—Remark.

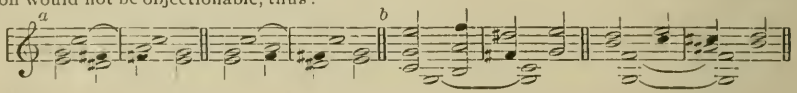
195. Unharmonic Cross-relation.—In modulation the connection of two chords belonging to two distantly related keys bring about, at times, a very *unharmonious relation.*

N. B.—Whenever in the connection of two chords a tone is found which is *chromatically* RAISED or LOWERED in the second chord, such tone should then *be held by the same voice* in both chords (as at *a*), as otherwise—if the two tones were heard in two different voices, as at *c*—there would result a very harsh, *unharmonious relation* called: UNHARMONIC CROSS-RELATION (as at *b*), which should be avoided.

Faulty.



REMARK.—The *unharmonic cross-relation* is not always faulty. In some instances the tones forming it may constitute a *double appoggiatura* in two voices (167); in such cases the unharmonic relation would not be objectionable, thus:



196. Remarks on Modulation.—To modulate well requires either an intuitive musical taste, or a thorough knowledge of the means employed in modulation. The latter can be gained by continual practical application of the different means pointed out in this chapter.

N. B.—The principal points to observe in modulating may be presented thus:

A.—That the new key be established (introduced) so as not to permit the auditor to notice the intention of modulating;

B.—That the modulation be brought about as a natural result of the *melodic* or *thematic development* of a composition;

C.—That the modulation occur at the end of a *period* or *strain*, so that the melody (or subject) in the new key be taken up at the beginning of a period, strain, or movement.

REMARK.—In order to acquire a facility in the effective use of modulations in a composition, the student should analyze the compositions of the best masters. He should especially observe the *means employed* (A), and the *manner* (B) and *place* (C) of their introduction.

QUESTIONS TO CHAPTER XIV.

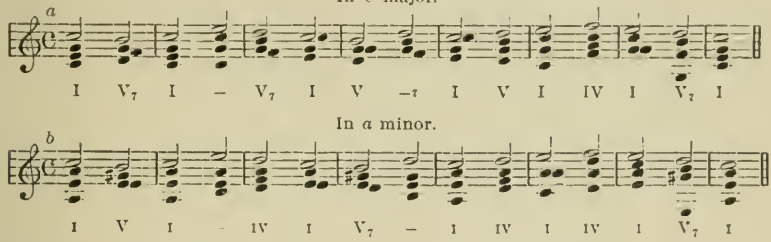
186—**174.** What is modulation? 187—**177.** What is required of a perfect modulation? 188—**178.** Which are the diatonically related major (and minor) keys of a major key? 189—**178.** Which are the diatonically related major (and minor) keys of a minor key? 190—**180.** What is a *mediating chord*? 191—**186, 188.** Which sept-chords are used in their *regular resolution* in modulation? 192—**191.** Which sept-chords are frequently used in their *irregular resolution* in modulation? 193—**192.** What are enharmonic tones? 194—**193.** Which inversion of a *major* or *minor triad* is used as a means of modulation? 195—**195.** What is an *unharmonic cross-relation*?

Chapter XV.

HARMONIZATION OF A MELODY.

197. **Essential Chords of a Scale.**—In all the exercises thus far given the chords employed (*triads* and *sept-chords*) have been indicated by figures over or under a Bass-part. We may, however, place a *melody* in the Soprano (or any other voice) and choose such harmony as is best adapted to accompany the given melody (see 63).

N. B.—The chords of a scale which most decidedly establish the *major* or *minor* character of a key are the PRIMARY TRIADS—*tonic*, *sub-dominant* and *dominant triad* or DOMINANT SEPT-CHORD (see 97). They are therefore called the ESSENTIAL CHORDS OF THE MAJOR OR MINOR SCALE. These chords are especially adapted to constitute the harmonic accompaniment to a melody—particularly as the *tones of a melody* do not always definitely establish its tonality (see 181), which can only be brought about by employing the ESSENTIAL (*primary*—97) CHORDS of a scale, thus:

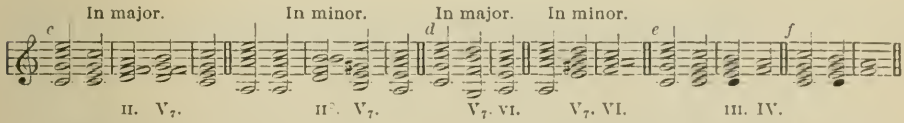


MAXIM.—The chords occurring upon the accented part of a measure (see 167—Maxim) should be ESSENTIAL (*primary*) CHORDS; as the chords appearing upon this part of a measure receive more *weight* and *emphasis*, and are of more *significance* than those that appear upon the unaccented part of a measure, which receive more the character of *passing chords* (see 167—N. B.)

Of the four COLLATERAL (*secondary*—48, 69) CHORDS only two are adapted to be employed upon the accented part of a measure; these are:

A.—The chord upon the II. degree if followed by the *dominant* (as in the CADENCE—II., V.), at *c*; and

B.—The chord upon the VI. degree, if it follows the *dominant* (as in the DECEPTIVE CADENCE—V_7, VI.), at *d*.

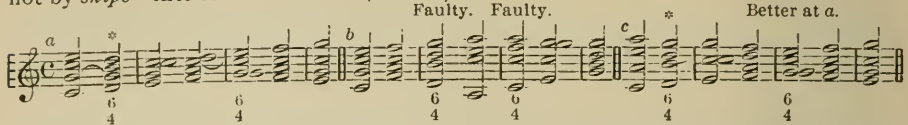


REMARK.—The *collateral chords* do not establish the tonality of a key (48—N.B.). However, if they should occur upon the accented part of a measure the ear would then be inclined to accept them as *primary chords* (Maxim) of some other key, thereby suggesting a modulation. Consequently they should be used upon the accented part with due consideration of their *position* and *relation* to other chords of the scale (see 60), if not employed as pointed out at A and B. The chord upon the III. degree is, of all the collateral chords, the least fitted to be used upon the accented part, unless it be employed as at *e*, where it seems to constitute part of the TONIC SEPT-CHORD, with the *passing seventh* (122—A), which resolves regularly into the triad a fourth degree above (see 111). Upon the unaccented part (as a passing chord) it may occur in connection with other chords than at *f*. In modulation, however, it is very useful (see 183).

198. Application of the Four-Six Chord.—The *four-six chord* has a decided tendency for resolution (89).

N. B.—On account of its tendency for resolution the FOUR-SIX CHORD should not be employed upon the accented part of the measure, *unless it regularly resolve as shown in* 89 (193—N. B.). It may however be used under the following conditions:

A.—If it occurs upon the *accented* or *unaccented part* of the measure, like a *passing chord* (167), as at *a* and *c*—*; in this case it requires:

B.—That the Bass (or lower voice) move into it and out of it by *degrees* (as at *a*), not by *skips*—into it and out of it (as at *b*).

REMARK.—The application of the *four-six chord* will be most satisfactory if the FOURTH *be prepared* (as at *a*). It may occur without this preparation of the fourth (as at *c*), but the stiffness of the harmonic connection may easily be observed by comparing the examples *a* and *c*.

199. Harmonization of the Major Scale.—In 63 the major scale was harmonized with *primary triads.*

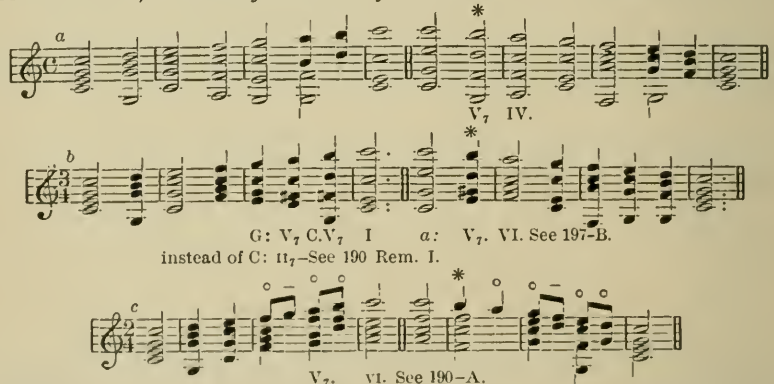
N. B.—The seven consecutive tones of a scale, if brought in rhythmical order or time division, such as 4-4, 3-4, or 2-4 time, will constitute a short *perfect melody*, in so far as in it are contained the THREE PRINCIPAL CONDITIONS required of a melody, viz.: a *beginning* establishing the tonality of the key; the *continuation* in the established key, or some diatonically related key; and a satisfactory *ending* in the original key.

These conditions required of a melody necessitate the following:

A.—A melody always begins with a tone of the *tonic triad;* consequently the harmony to accompany this should be the TONIC TRIAD in its fundamental position.

B.—A melody continues in the established key or in some of the diatonically related keys (178); therefore the harmony to be employed should be the ESSENTIAL (*primary*) CHORDS of the established key or those of the related keys (see 197—N. B.).

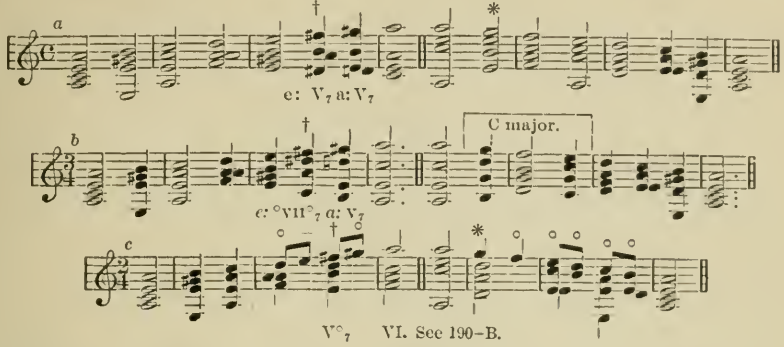
C.—A perfect melody *always* ends with the key-note of the original key; the last chord must in consequence be the TONIC TRIAD in its fundamental position (see 181—Remark). The major scale may be harmonized as follows:



REMARK.—In the foregoing examples, at *, the leading tone is in the melody and descends, which makes it rather awkward to harmonize the two tones: B—A. At *a* we employ the dominant sept-chord, which resolves irregularly (*deceptive cadence*, seventh remaining stationary) to the triad upon the IV. degree; at *b* we employ the dominant sept-chord of the relative minor key (*a* minor), which likewise resolves irregularly to the triad upon the VI. degree. In this case the B is no longer leading tone; this harmonization is therefore very satisfactory. At *c* the leading tone appears as an appoggiatura (163) and consequently sounds more satisfactory than if it were a chord-tone, as at *a*—*. At *c* the ascending and descending scale together constitute two sections of a melody (N. B.). The ascending scale does not end with a *perfect cadence* (as at *a*, *b*), but with a *deceptive cadence*. The ear is therefore not satisfied, and expects another section of the melody, which should end with the perfect cadence. In all of the above examples the PRIMARY CHORDS (197—N. B.) are employed upon the accented part of the measure, with the exception of the *deceptive cadence* at *c*. Even at *b*—* the F major triad following the dominant sept-chord appears more like the triad upon the IV. degree of C major than VI. degree of *a* minor.

200. Harmonization of the Minor Scale.—The *melodic minor scale* is the most irregularly formed of all scales, as, in ascending, the *sixth* and *seventh* tones are raised, and in descending they are again lowered (see **64**).

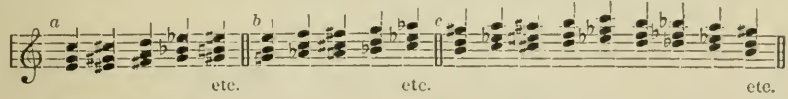
The MELODIC MINOR SCALE may be harmonized (like the *major scale*—199) in various ways; thus:

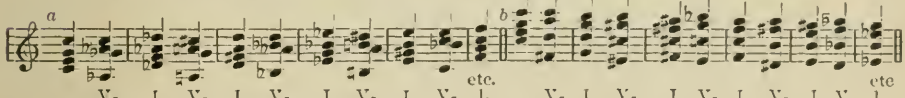


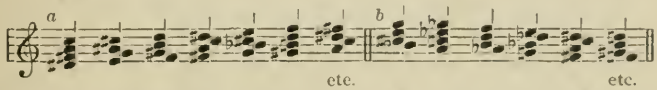
REMARK.—The *melodic minor scale* is usually employed in melody (**64**—C). Ascending, the raised *sixth* gives us the most difficulty if it is to be harmonized as a *chord-tone* (as at *a* and *b*). At *a*—† we employ the dominant sept-chord of the dominant key (*e* minor), which frequently stands instead of the sept-chord upon the II°7 degree (see **190**—Remark 1); at *b*—† we take the diminished sept-chord of the dominant key, and at *c* we treat the *sixth* as a passing tone or appoggiatura (**163**—Maxim); it however also constitutes the ninth, which makes it less harsh (**136**—B). The *seventh* (leading tone lowered descending, likewise gives us difficulties if it is to be a chord-tone, as at *a*—*. In the latter example (*a*) we employ a *minor triad* upon the fifth degree which, being taken as TONIC TRIAD of the related minor key upon the dominant, *e* minor (**178**—C), resolves to the major triad upon the VI. degree of *a* minor; thus making the succession of triads: *e* minor-F major appear as if they belonged to C major—III. IV. (see **197**—Remark). The *seventh* and following two tones in the example at *b* are harmonized in C major, and the succeeding tones again in *a* minor. At *c* it appears as appoggiatura.

201. Harmonization of the Chromatic Scale.—The *chromatic scale* does not establish a definite tonality, but is employed in the character of passing tones (**161**—C).

The CHROMATIC SCALE may be harmonized in various ways, viz.:

A.—With MAJOR (*a*), MINOR (*b*), or DIMINISHED TRIADS (*c*) in *six-chords*—ascending or descending:

B.—With DOMINANT SEPT-CHORDS, *regularly resolved*—ascending and descending.



C.—With DIMINISHED SEPT-CHORDS in succession—ascending and descending.

REMARK.—The *chromatic succession* of SIX-CHORDS as in examples in A are rarely employed except in dramatic compositions; likewise the chromatic succession of *diminished sept-chords* (C). A succession of DOMINANT SEPT-CHORDS (B) may find application, but as their repeated *regular resolutions* are in the form of a sequence (**58**), it becomes monotonous if more than three such successions occur.

202. Melodic Progression of the Bass.—A *melodic progression* of the Bass is an essential requirement of a good composition.

N. B.—The Soprano and the Bass are the two outer voices, and as such are heard more distinctly than the middle parts. The Soprano usually carries the melody, and the Bass should likewise be made melodious by observing the following:

A.—In the connection of *two different chords* the Bass should not hold the COMMON TONE (39), but should move to a tone of the following chord (40). The Bass may continue to hold a tone in the connection of two chords if the following chord is a different position (inversion) of the first chord—or if the sustained tone constitutes the *preparation* of the dissonant in a suspension (151) and sept-chord (109), or forms the *four-six cadence* (see 204—Remark).

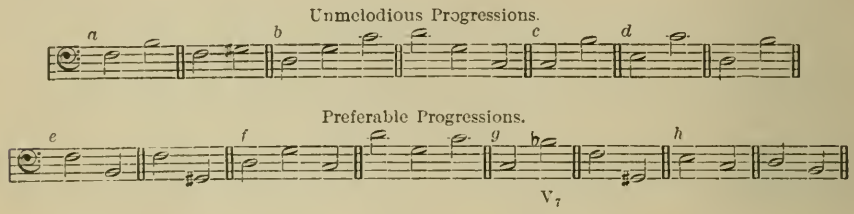
B.—The following progressions should be avoided in the Bass:

1.—All *augmented intervals* (a)—the diminished are preferred (e);

2.—Two *fourths* or *fifths* in the same direction (b);

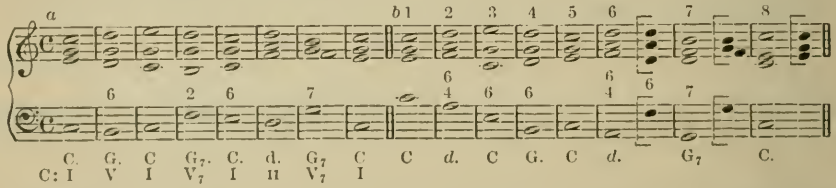
3.—All *skips of a seventh* (*c*)—unless it be into the dominant or diminished seventh (*g*);

4.—The *minor sixth* is better than the *major sixth* (*d*)—the third is preferable to both (h).



REMARK.—The above conditions, with the rule regarding the application of the *four-six chord* (198), constitute the principal points to be observed in the construction of a good Bass, either in vocal or instrumental compositions.

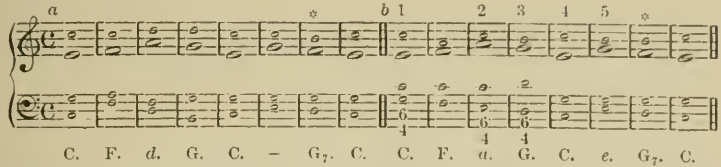
203. Harmonization of a Melody in the Soprano. The Soprano, being the upper voice, is best fitted to carry the melody.

The following examples of a melody in whole notes in the Soprano will give us occasion for some general remarks.

REMARK.—The capital letters have in all exercises thus far given indicated the *major* scale, and the smaller (script) letters the *minor* scales. In the foregoing examples a capital letter denotes a *major chord* and the small letter a *minor chord*—not a major or minor scale.

The leading of all the parts, at *a*, are in conformity with the rules governing *pure four-part writing*. In the example *b*, however, there are several objectionable points. The *four-six chord*, at 2, is not employed according to the rules laid down in 198. The third, at 3, is doubled in the *six-chord*; at 6, although the Bass in the *four-six chord* resolves by degrees into the next chord, the upper voices, however, all descend (at 7) into an unfavorable position of the dominant sept-chord (118), which, on account of this position resolves (at 8) into the incomplete tonic triad (98). This latter is not an error; nevertheless, the leading of the parts could be improved, as indicated by the small notes in brackets. The Bass, in the second, third and fourth measures, progresses in fourths in the same direction, which makes the Bass part very unmelodious (see 202—B).

204. **Melody in the Alto.**—A melody in the Alto may be harmonized similar to the example of a melody in the Soprano (202).

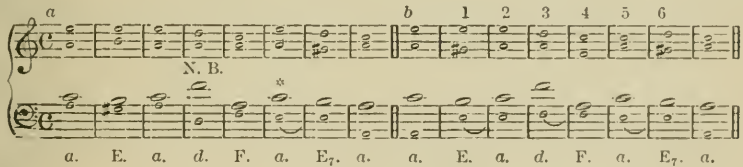
As the Alto is a middle voice (35) the Soprano must be placed above and the Tenor and Bass below it; thus:



REMARK.—The alto, being a middle (inner) voice, may begin and end with the *third* or *fifth* of the tonic triad (as at *a*, *b*); the Bass (or lower voice) must, however, begin and close with the *root*—FUNDAMENTAL POSITION OF THE TONIC TRIAD (199—A). At *a*, *b*, * the progression of the Bass —from the *three-four chord* to the tonic triad—forms an *imperfect cadence* (see 125—C). This is allowed in the middle divisions (sections, periods or strains) of a larger composition (see 106), but not at the end where we should always employ a PERFECT CADENCE (124). At *b*—1 the Bass begins with the *four-six chord* which is faulty. At 2 the use of the four-six chord of the collateral chord upon the VI. degree is correctly introduced (see 198), but its resolution into another four-six chord, and the connection of these two chords, VI., V., make this succession of chords appear stiff and unusual (see 197—B). At 3, 4 the Tenor makes a skip of a fifth downward, which is not objectionable, as it occurs in a middle voice, but the progression downward of the Alto and Bass likewise, makes this progression sound forced (see 91—Exercise). The use of the *mediant triad* (III. degree, at 5, is not well chosen at the close (see 197—Remark). The progression of the Bass at *b* is melodious, but the unfavorable application of the collateral chords makes this example stiff and unsatisfactory.

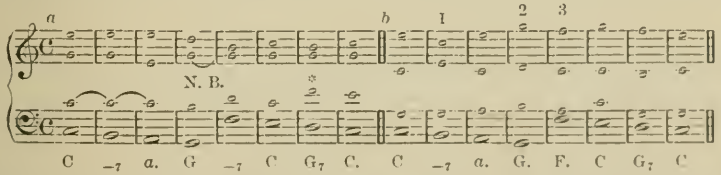
205. **Melody in the Tenor and Bass.**—The compass of the Tenor is notated partly in the Bass clef and partly in the Treble clef (34).

A.—The following melody in the Tenor may be placed in the Treble or Bass clef, as the limit of its compass will permit of either. It may also be placed in the C clef—Tenor clef; this latter, however, is most frequently employed in the exercises in counterpoint.



REMARK I.—At *a*, N. B. the Tenor makes a skip of a sixth which should only be employed in the melody or in the Bass. At *a*, * the Bass holds the common tone which is not objectionable, as it forms the *four-six cadence*. In the example at *b*, however, the Bass holds the common tone at 1, 2; 3, 4; and 5, 6. This makes the Bass part very undecided and weak compared with that at *a*. The example at *b* is therefore faulty (see 202—A, B).

B.—A melody in the Bass will give us no more difficulty in harmonizing than did a given Bass in the four-part exercises, as the Bass part (which to form correctly is the most difficult) is given in both.



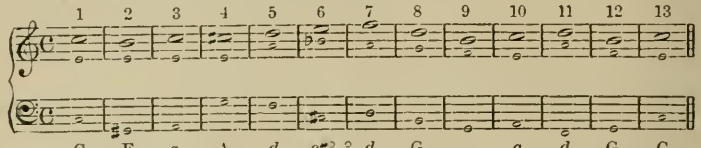
REMARK II.—At *a*, second measure, the Bass passes through the major seventh of the tonic sept-chord according to the rules pointed out in 122; not so at *b*. 1, which is faulty, as the root is not retained (prepared). The skip of a seventh in the Bass at *a*. N. B. is allowed in the melody and otherwise in the Bass if the latter skip into the seventh of the dominant sept-chord as at *a*, not as at *b*, 2, 3 (see 202—B). The distance between the Soprano and Alto at *b* is faulty, as the distance between the three upper voices should not exceed an octave, otherwise the *harmonic compactness* and *solidity* (which is an essential requirement of a good composition) would thereby be destroyed. Between the Tenor and Bass the distance may exceed an octave (as at *a*, *).

206. Three-Part Harmony.—In *three-part harmony* the following rules governing the connection of chords and doubling must be observed.

A.—A TRIAD may occur incomplete; the *fifth* should then be omitted (1, 13), rarely the *third* or *root*. The latter should be doubled in the fundamental and six-chord.

B.—In a SEPT-CHORD the *fifth* may be omitted (as at 6, 9, 12), rarely the *third*.

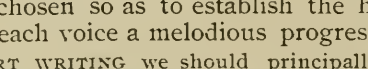
C.—In the DOMINANT SEPT-CHORD the *root* may be omitted, thereby employing the DIMINISHED TRIAD instead (see 184—Remark), which (like the former) regularly resolves into the tonic triad (as at 4);—or the *seventh* may be omitted, thereby establishing the DOMINANT TRIAD instead (as at 2).



REMARK.—The foregoing example begins and ends with the fundamental position of the tonic triad *without the fifth*. In the dominant sept-chords at 2, 4, 9, and 12 are omitted either the root, fifth or seventh, but *not the third*, as this latter is the LEADING TONE which, especially in an imperfect modulation (174), as at 2, 4, 6, must not be omitted. Particular attention should be given to the leading of the voices at the end, so as to form a good *cadence*.

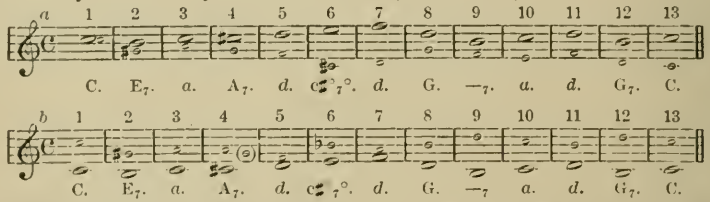
207. Two-Part Harmony.—In *two-part harmony* the two tones employed should be chosen so as to establish the harmony as definitely as possible, and give to each voice a melodious progression (see 202—N. B.).

N. B.—In TWO-PART WRITING we should principally employ the *perfect* and *imperfect consonances* (22). The *perfect fourth* must not be used however, as it does not establish harmony nor suggest any chord whatever; *e. g.*:



MAXIM.—In two-part writing the IMPERFECT CONSONANCES (*thirds* and *sixths*) are most adapted to establish definite harmony; the *perfect fifth* less so. The *perfect octave* does not establish any definite chord, but may be employed occasionally in the middle. The octave of the *keynote* is, however, frequently employed at the beginning and at the end, likewise the unison, so as to establish the key. The *diminished fifth* and its inversion, the *augmented fourth*, may be used *if it resolves regularly;* the *dominant seventh* may likewise occur (see 118—A), but the other sevenths *only* when employed as PASSING SEVENTH (see 205—Remark—II).

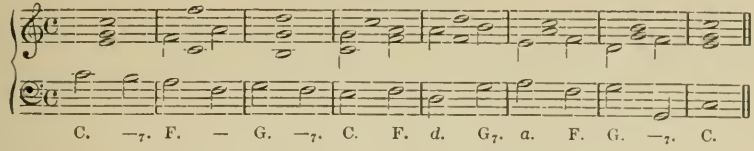
The melody in 206 may be harmonized by adding a part *below* (*a*) and *above* (*b*).



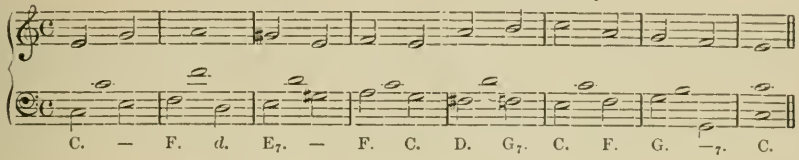
REMARK.—At *a* we begin with the tonic in both voices in *unison* and end with the tonic (keynote) in the octave—thus definitely establishing the key and forming the most satisfactory close in two-part harmony. In the second measure we employ the *third* (leading tone) and *fifth* of the dominant sept-chord and resolve these into the *root* and *third* of the tonic triad (at 3). At 4 we employ the *third* (leading tone) and *seventh* of the dominant sept-chord, thus forming the AUGMENTED FOURTH which regularly resolves into the tonic triad, at 5. Of the diminished sept-chord, at 6, we take the *root* (leading tone) and *third*, likewise of the following tonic triad. Of the major triad at 8 we take the *root* and *fifth*, and of the following dominant the *third* (leading tone) and *seventh*, which regularly resolve as at 1. Of the dominant sept-chord in the cadence we employ the *third* (leading tone) and *fifth*, these two tones moving *by degrees* into the tonic (keynote), thus establishing the cadence. At *b* the indicated harmony is the same as at *a*, although the intervals employed are not always the same. At *b*, 10, the octave (C, C) is not well chosen, as it does not suggest the *a* minor chord (deceptive cadence) indicated, but rather the regular cadence in C major, which should not occur but at the end (see 106). At *a*, 10, the two tones establish the *a* minor chord in the deceptive cadence more definitely, although the same two tones likewise constitute the *root* and *third* of the tonic triad of the original key—C major; but as the *third* is in the lower voice (six-chord) the cadence is imperfect, and consequently not as decided as at 12, 13.

208. **Two Chords to One Note in the Melody.**—A tone in the melody may have several chords as harmonic accompaniment, thus:

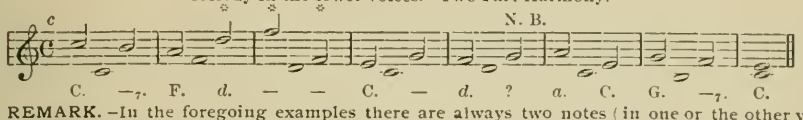
a Melody in the Soprano.



b Same melody in the Tenor—Three-Part Harmony.



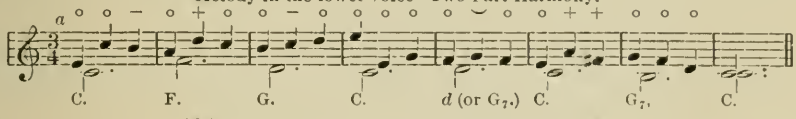
Melody in the lower voices.—Two-Part Harmony.



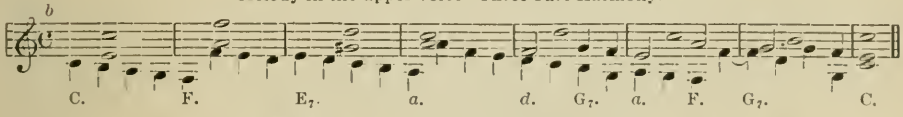
REMARK.—In the foregoing examples there are always two notes (in one or the other voice) against one in the melody. There are not always *two chords* against one note in the melody, however. At *c*, *, the same chord in different positions is employed in two measures; there are, nevertheless, two notes against one in the melody, so that the *rhythm* (the regular recurring half notes in each measure) is maintained throughout, which gives these examples a *melodic* and *rhythmic satisfaction*. At *c*—N. B. the *perfect fourth* is used as a *passing tone;* as such it may occur upon the unaccented part; upon the accented part of the measure it should *not* be employed. See 207—N. B.

209. **Several Notes against One in the Melody.**—In the foregoing section two notes were employed against one in the melody. *Three* (*a*), *four* (*b*) and *more* notes (*c*) may appear in one or more parts against one note in the melody, thus:

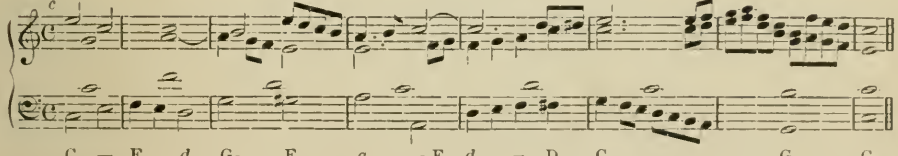
Melody in the lower voice—Two-Part Harmony.



Melody in the upper voice—Three-Part Harmony.



Melody in the Tenor—Four-Part Harmony.



REMARK.—In the above examples the same melody is found which was employed in 208. In three-four time, at *a*, the unaccented part of the measure falls upon the *second* and *third* quarter, in four-four time upon the *second* and *fourth* quarter. Upon these we may employ the *passing tones* and *alternating tones* (see 161, 162; the *appoggiaturas* and *suspensions* occur upon the accented parts of the measure see 163, 151—B). It will be seen, however, that the harmonies employed are the *essential* (primary) *chords* which are always employed upon the accented part of the measure (see 197—Maxim).

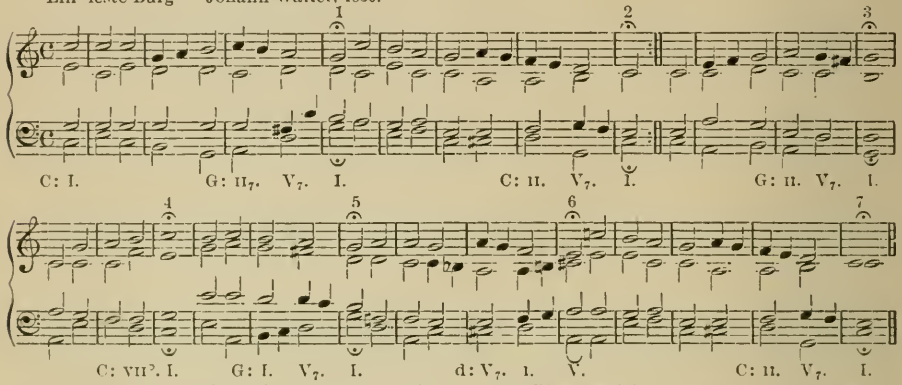
210. Application of the Cadences—Half Cadence.—The different cadences (90, 124, 125) are employed in a composition at the end of a *phrase, section* or *period.*

A.—The PERFECT CADENCE—*plagal* or *authentic* (124), should be employed at the end of a composition (at 7); at the end of a period (at 2), and may likewise occur at the end of a phrase or section (at 1, 3, 5).

B.—The IMPERFECT CADENCE (125) may be used at the end of a phrase or section in the middle of a composition (at 4).

C.—The HALF-CADENCE is found whenever a phrase or section ends with the *dominant chord* (6), and is employed in the middle of a composition (see Remark).

"Ein' feste Burg"—Johann Walter, 1530.

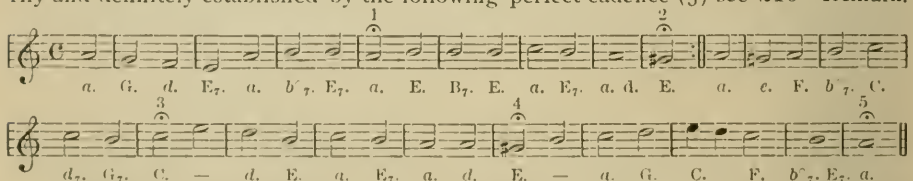


REMARK.—The foregoing choral contains *seven sections*, which represent the seven verses of the hymn. At the end of each section (verse) we form one of the cadences (pause) mentioned in A, B, C. The first part of the choral has two sections and is repeated. The first section ends with the *perfect cadence* in the dominant key (178—A), and the second with a *perfect authentic cadence* in the original key—C major (see 211— Remark). The sections 3 and 5 end with a *perfect cadence* in the dominant key; the fourth section with an *imperfect cadence* in the original key; the sixth ends with an HALF CADENCE (see C) in the key of *d* minor, and the last section is a repetition of the second, and ends with a *perfect authentic cadence* in the original key—C major.

211. Modulation in a Melody.—Not every melody indicates the modulation as definitely as does the melody in 181.

N. B.—In a short and simple melody it is best to remain in the tonality of the established key. In a lengthy melody or a small composition—such as a choral, a plan of suitable modulation should be arranged however, so that the different points in a melody—*beginning, continuation* and *ending* (see 199—N. B.)—may thereby be more conspicuously presented to the ear.

MAXIM.—A MELODY should always begin and end in the established key—with the tonic triad (see 199—A, B, C). The first division (first part) may end in the original key or in the *dominant key* or *dominant triad* (2)—HALF CADENCE (210—C). In the second division (second part) we employ suitable modulations (3, 4); the phrase or section before the last or final section ought to close in the *dominant key* or with the *dominant triad* of the original key (4), so that the latter key becomes again satisfactorily and definitely established by the following perfect cadence (5) see 210—Remark.



REMARK.—The first division of a melody (the first part) usually contains two sections. If the first section ends with the tonic chord (1) the second should end with the *dominant chord* (2) or *dominant key.* If the first section ends with the *dominant chord* or *dominant key* the second should end with the *tonic triad* of the original key (210—1, 2).

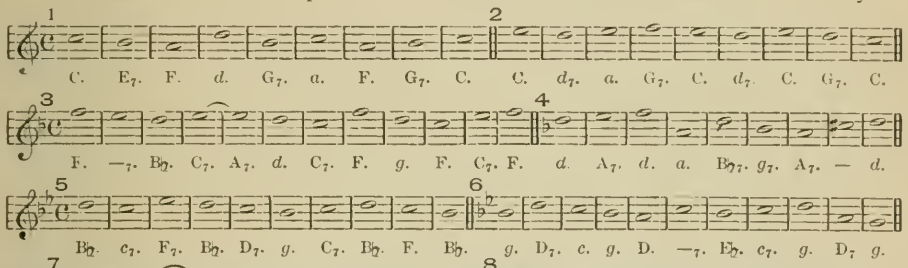
212. Exercises in Harmonization.—The student has hitherto added the three upper parts to a given Bass. It will now be necessary to gain a facility in writing the three other parts to a given Soprano, Alto or Tenor, as was shown in 203, 204 and 205.

N. B.—The Bass part is the most difficult to write, as it forms with the Soprano the outer voices which are more conspicuous than the middle voices. The Bass always forms the harmonic foundation, but it must nevertheless be melodious. Its construction consequently demands more attention and care than that of the middle parts, in the formation of which we may take certain liberties which would not be allowed in the Bass (see 202).

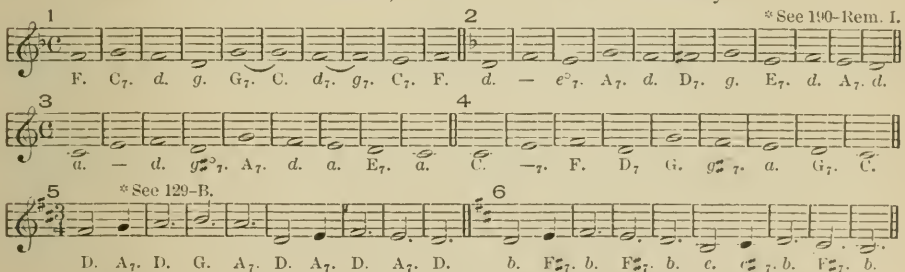
MAXIM.—In working out the exercises given below the student should form two examples of each exercise (as in 204). He should then play the Bass part separately so as to observe whether it is melodious or not. Particular attention should be paid to the use of the four-six chord (198) and the formation of the cadence (210). In the exercises in three-part harmony (see 206), and in two-part harmony (see 207).

EXERCISE.—Work out the following melodies in *four*, *three* and *two-part harmony*, and observe the rules and maxims laid down in 198, 202, 203, 204, 205, 206, 207, 210 and 211. The melodies (chorals) in the Soprano may likewise be employed in the Tenor. The melodies in the Tenor (according to their compass) may be placed in the Treble or Bass-clef—in *close* or *open* position (see 205).

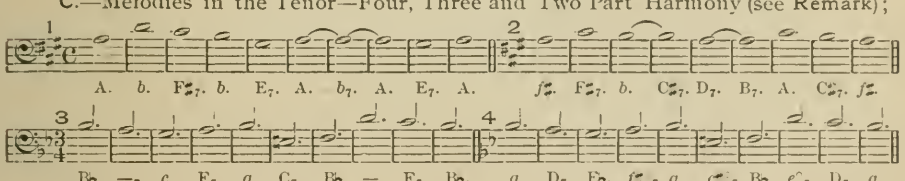
A.—Melodies in the Soprano or Tenor—Four, Three and Two Part Harmony.


1
2
C. E7. F. d. G7. a. F. G7. C. C. d7. a. G7. C. d7. C. G7. C.
3
4
F. —7. B♭. C7. A7. d. C7. F. g. F. C7. F. d. A7. d. a. B♭7. g7. A7. — d.
5
6
B♭. c7. F7. B♭. D7. g. C7. B♭. F. B♭. g. D7. c. g. D. —7. E♭. c7. g. D7 g.
7
8
G. —7. E7. f♯°7. D7. G. a7. G. D7. G. e. B7. d♯7. e. G. a. e. B7. e.

B.—Melodies in the Alto—Four, Three and Two Part Harmony.


1
2
* See 190-Rem. I.
F. C7. d. g. G7. C. d7. g7. C7. F. d. — e°7. A7. d. D7. g. E7. d. A7. d.
3
4
a. — d. g♯°7. A7. d. a. E7. a. C. —7. F. D7 G. g♯ 7. a. G7. C.
5
* See 129-B.
6
D. A7. D. G. A7. D. A7. D. A7. D. b. F♯7. b. F♯7. b. c. c♯ 7. b. F♯7. b.

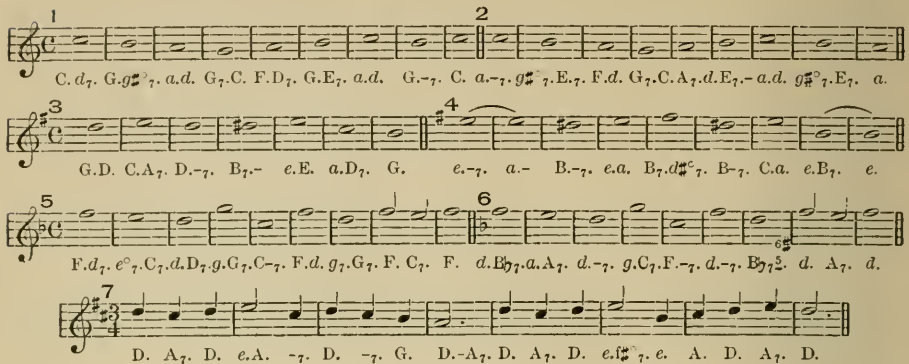
C.—Melodies in the Tenor—Four, Three and Two Part Harmony (see Remark);



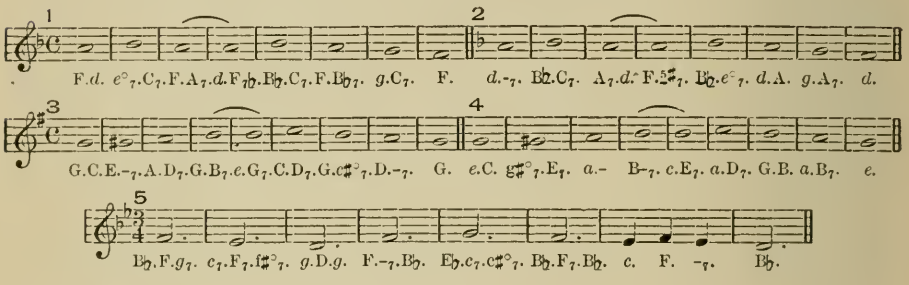
REMARK.—If the melodies at A are employed in the Tenor they must be transposed an octave lower.

In the following melodies two chords are given to one note in the melody.

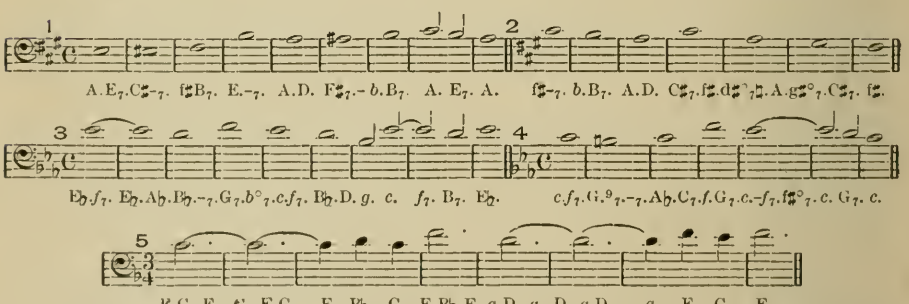
D.—Melodies in Soprano—Four, Three and Two Part Harmony (see 206—208).


1
2
C. d7. G.g♯°7. a.d. G7.C. F.D7. G.E7. a.d. G.–7. C. a.–7. g♯°7.E.7. F.d. G7.C.A7.d.E7.– a.d. g♯°7.E7. a.
3
4
G.D. C.A7. D.–7. B7.– e.E. a.D7. G. e.–7. a.– B.–7. e.a. B7.d♯°7. B–7. C.a. e.B7. e.
5
6
F.d7. e°7.C7.d.D7.g.G7.C–7. F.d. g7.G7. F. C7. F. d.B♭7.a.A7. d.–7. g.C7.F.–7. d.–7. B♭7♯. d. A7. d.
7
D. A7. D. e.A. –7. D. –7. G. D.–A7. D. A7. D. e.f♯°7. e. A. D. A7. D.

E.—Melodies in the Alto—Four, Three and Two Part Harmony (see 208).

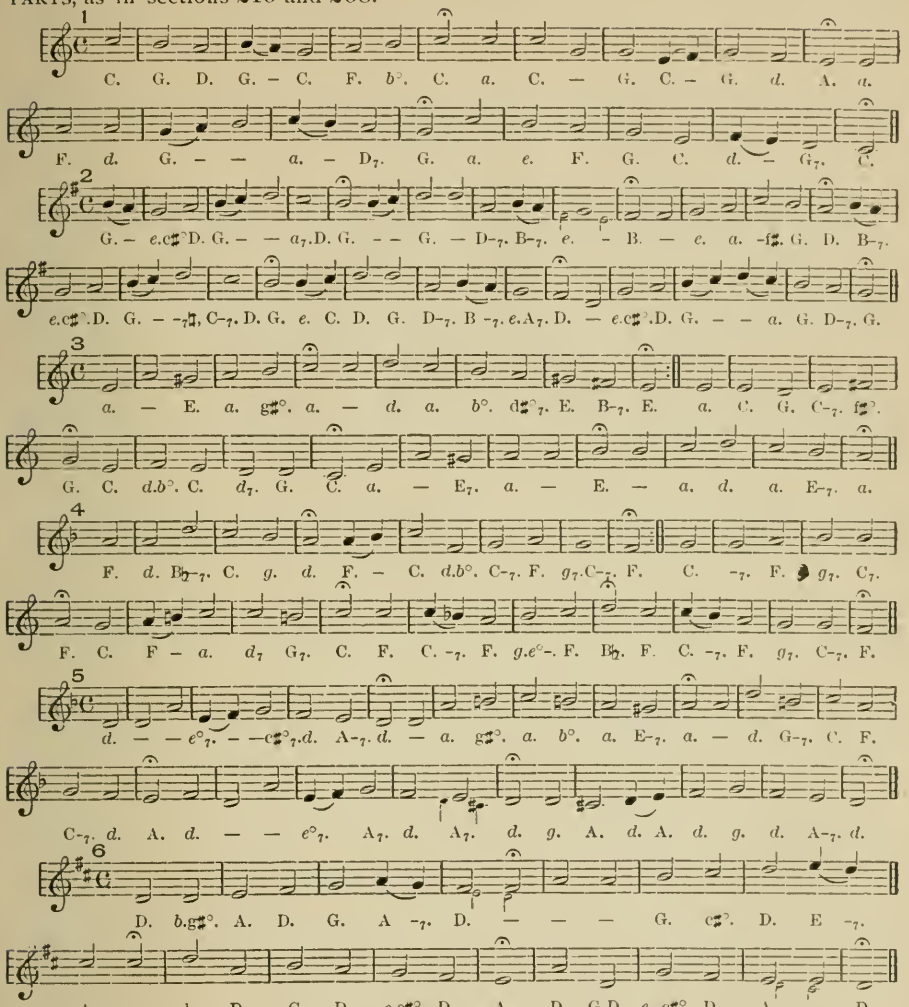

1
2
F.d. e°7.C7.F.A7.d.F♭.B♭.C7.F.B♭7. g.C7. F. d.–7. B♭.C7. A7.d. F.♯7. B♭. e°7. d.A. g.A7. d.
3
4
G.C.E.–7.A.D7.G.B7.e.G7.C.D7.G.c♯°7.D.–7. G. e.C. g♯°7.E7. a.– B–7. c.E7. a.D7. G.B. a.B7. e.
5
B♭.F.g7. c7.F7.f♯°7. g.D.g. F.–7.B♭. E♭.c7.c♯°7. B♭.F7.B♭. c. F. –7. B♭.

F.—Melody in the Tenor—Four, Three and Two Part Harmony (see 208).


1
2
A.E7.C♯–7. f♯B7. E.–7. A.D. F♯7.– b.B7. A. E7. A. f♯–7. b.B7. A.D. C♯7.f♯.d♯°7.A.g♯°7.C♯7. f♯.
3
4
B♭.f7. E♭.A♭.B♭7.–7.G7.b°7.c.f7. B♭.D. g. c. f7. B7. E♭. c.f7.G.9 7.–7.A♭.C7.f.G7.c.–f7.f♯°7. c. G7. c.
5
F.C7.F. C7.F.C7. F. B♭. C7. F.B♭.F. g.D7.g. D7.g.D7. g. F. C7. F.

REMARK.—In the foregoing exercises particular attention must be given to the Bass part (see 199—A, B, C and 202). In the examples E—5 and F—5 the Soprano and Bass should be made especially melodious, as they are the outer voices (see 173).

G.—The following chorals should be worked out in FOUR, THREE and TWO PARTS, as in sections 210 and 208.


1
C. G. D. G. – C. F. b°. C. a. C. — G. C. – G. d. A. a.
F. d. G. – – a. – D7. G. a. e. F. G. C. d. – G7. C.
2
G. – e.c♯°.D. G. – – a7.D. G. – – G. – D–7. B–7. e. – B. – e. a. –f♯. G. D. B–7.
e.c♯°.D. G. – –7♮, C–7. D. G. e. C. D. G. D–7. B –7. e.A7. D. – e.c♯°.D. G. – – a. G. D–7. G.
3
a. — E. a. g♯°. a. — d. a. b°. d♯°7. E. B–7. E. a. C. G. C–7. f♯°.
G. C. d.b°. C. d7. G. C. a. — E7. a. — E. — a. d. a. E–7. a.
4
F. d. B♭–7. C. g. d. F. – C. d.b°. C–7. F. g7.C–7. F. C. –7. F. g7. C7.
F. C. F – a. d7 G7. C. F. C. –7. F. g.e°–. F. B♭. F. C. –7. F. g7. C–7. F.
5
d. — – e°7. – –c♯°7.d. A–7. d. — a. g♯°. a. b°. a. E–7. a. — d. G–7. C. F.
C–7. d. A. d. — — e°7. A7. d. A7. d. g. A. d. A. d. g. d. A–7. d.
6
D. b.g♯°. A. D. G. A –7. D. — — — G. c♯°. D. E –7.
A. — b. D. G. D. e.c♯°. D. A. D. G.D. e7.c♯°. D. A. –7. D.

REMARK.—The student—after having worked out the above chorals—may work them again and choose his own harmony, and afterwards compare them with the above. The essential point to observe will be the correct division of the modulation (see 211) and the formation of the cadences at the pauses (see 210).

QUESTIONS TO CHAPTER XV.

196—197. Which are the essential chords of a scale? 197—197. Upon which part of a measure should the essential chords be employed? 198—197. Which of the collateral chords may be employed upon the accented part of a measure? 199—197. What triad is rarely used upon the accented part of a measure? 200—198. Under what conditions may the four-six chord be used? 201—199. What three points are observed in the construction of a melody? 202—199. What chord does a melody begin and end with? 203—202. What points must be observed in the construction of a Bass? 204—206. Which tone may be omitted in a triad or sept-chord in three-part harmony? 205—206. What chord may be employed instead of a dominant sept-chord? 206—207. What interval is never employed in two-part harmony? and what intervals are employed? 207—210. What is a half-cadence?

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